TOWARD A COMPOSITIONAL PARADIGM BASED ON POST-TONALITY, JAZZ, AND COUNTERPOINT

by

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(Under the Direction of Adrian Childs)

ABSTRACT

There is a neglected body of musical works which engage post-tonality, jazz, and counterpoint. The sharing in common of a modernist aesthetic, a propensity for mutual borrowing, and a concern for the reinterpretation of Baroque counterpoint; creates a unique bond between these post-tonal and jazz musicians as well as the musical styles they represent. With Alcedo Coenen's theory of compositional paradigms as a point of departure, this study proposes the existence of a compositional paradigm defined by a mutual borrowing between post-tonal music and jazz that is accompanied by the employment of contrapuntal processes. Among the composers selected for this study are: Darius Milhaud, Alban Berg, Paul Hindemith, Igor Stravinsky, Bela Bartok, William Bolcom, George Gershwin, Bud Powell, Miles Davis, John Lewis, Dave Brubeck and Jacques Loussier. Not only do these composers write works in this vein, many share significant collaborative and pedagogical relationships that further illuminate the stylistic commonalities and creative exchange. Within this paradigm which engages posttonality, jazz, and counterpoint, there is a compatibility between post-tonal and jazz vocabularies, innovative use of parameters, revisions of style, revisions of form, borrowing, recompositions, and various stages of counterpoint. Taking a cue from J.P. Burkholder's theory

of musical borrowing, a taxonomy is assembled to give structure to the stylistic heterogeneity. The taxonomic classification focuses on the global connections of form, style, and signs. The representative works of post-tonal and jazz composers belonging to this paradigm are organized into the following taxons according to shared characteristics: misreadings of the fugue, hybrid dance forms, misreadings of style, and misreading of jazz harmony.

INDEX WORDS: post-tonality, jazz, counterpoint, Bach, intertextuality, borrowing, allusion, paradigm, taxonomy, philosophy of science, fugue, style, musical space, modernism

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DEDICATION

This dissertation is first and above all dedicated to the Blessed Trinity: God the Father, Jesus, God the Son, and the God the Holy Spirit. Without God I am nothing and can do nothing. Thank You Jesus for Your Mercy and Grace.

This dissertation is also dedicated to my loving late mother Brenda Louise Sterrs, my supportive father Frank Terrell Sterrs and his relatives, the late Theresa Sterrs, Leonard and Georgia Davis, who are my late maternal grandparents, and all the descendants of the Davis family – both living and departed.

I can write another dissertation about all that is my heart, what has been done for me, and the legacy.

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CHAPTER 1

A NEGLECTED PARADIGM

Works such as Darius Milhaud's Creation du monde and Dave Brubeck's Chromatic *Fantasy Sonata* engage post-tonality,¹ jazz, and reinterpreted Baroque counterpoint all at once. Analytical studies of these works such as Deborah Mawer's Darius Milhaud: Modality and Structure in the Music of the 1920s, make note of the presence of all three idioms.² However, these observations focus largely on the personal style of the individual composers in question. Works that employ these three idioms are generally not analyzed as a recurring phenomenon or compositional type that is prevalent among the disparate styles of both post-tonal and jazz composers. The fact that post-tonal and jazz musicians alike vigorously study each other's music, as well as that of J.S. Bach, seldom acquires more significance than an interesting biographical note or a vague reference to influence. For example, the fact that Brubeck studied with Milhaud and both were admirers of Bach does not significantly color the current analyses of either composer. Their identities, their repertoires, and ultimately the analytical investigations of their work remain mutually exclusive. Darius Milhaud is classified as a posttonal composer and Dave Brubeck as a jazz musician. Each genre traditionally is approached with a different set of analytical tools. Nevertheless, works such as these, which engage these three divergent idioms, are, in fact, members of a distinct compositional paradigm.³ This is a

¹ The term "post-tonality" references all modern works which have alternative non-tonal pitch organizations, including but not limited to: atonal pitch space, bitonality, whole tone collections, octatonic collections, hexatonic collections, pentatonic collections, modality, and so forth.

² Deborah Mawer, Darius Milhaud: Modality and Structure in the Music of the 1920s

⁽Brookfield, Vermont: Ashgate Publishing Company, 1997), 2.

³³ The concept of compositional paradigm is taken from: Alcedo Coenen, "Stockhausen's Paradigm: A Survey of His Theories," *Perspectives of NewMusic*, Vol. 32, No.2 (Summer 1994): 200-225. Coenen provides a general

distinct compositional paradigm which is based upon mutual borrowing between post-tonality and jazz that is accompanied by the employment of contrapuntal processes. Recognition of this compositional paradigm should influence how we study post-tonal works, jazz, and Baroque counterpoint in general—as well as the musicians who engage all three. This study is an investigation of musical works which represent this compositional paradigm as well as the appropriate methodology for its analysis.

The number of composers who engage these three idioms or a combination of them is vast. The composers selected for this study include Milhaud, Berg, Hindemith, Stravinsky, Bartok, Bolcom, Gershwin, Davis, Lewis, Brubeck and Loussier. Not only do these composers write works in this vein, but there are also significant collaborative and pedagogical relationships that further illuminate the stylistic commonalities and creative exchange. These post-tonal and jazz composers are also selected because they each engage Baroque counterpoint actively in their works and personal studies. Among these composers, J.S. Bach emerges as representative of Baroque counterpoint. J.S. Bach is repeatedly cited by these composers both as an influence and a point of study.

The sharing in common of a modernist aesthetic, a propensity for mutual borrowing, and a concern for the reinterpretation of Baroque counterpoint create a unique bond between these post-tonal and jazz musicians as well as the musical styles (or compositional paradigms) they represent. According to Deborah Mawer, composers such as Milhaud and Stravinsky saw commonalities between the disparate styles they brought together.⁴ As we will see shortly, other composers such as Hindemith, Bolcom, Gershwin, and Brubeck express the same

definition of compositional paradigms based on Thomas Kuhn's theories. It is basically a compositional philosophy found between composers, among works of a given oeuvre, or exhibited within a single work. A more thorough discussion of this concept and its relationship to this study will follow shortly. ⁴ Mawer, 2.

sentiments in their commentaries and interviews. In fact, many of the composers listed, such as Berg of the Second Viennese School, view their repertoires as evolutionary extensions of Bach counterpoint.⁵ The characteristics of these works are as varied and unique as the composers who created them. Nevertheless, they share these three idioms in common.

We will begin with an overview of the relationship between modern music and jazz as well as their relationships to the counterpoint of J. S. Bach. This study and ultimately its analyses will engage several issues including the modernist aesthetic, Bach reception, compositional paradigms, evolutionary metaphor, intertextuality, musical space, and influence as anxiety. Firstly, in the analytical portion of this study, representative works of the composers selected will be analyzed using the current tools of tonal and post-tonal analysis. Gestures and other structures that are reflective of stylistic borrowing and contrapuntal reinterpretations will be highlighted. Secondly, the Bach recompositions encountered will be compared to the original Bach works that they reference overtly or evoke in spirit. Thirdly, taking a cue from Burkholder's theories of borrowing, the musical works will be classified into a typology or taxonomy.⁶ Of course, this taxonomy will not be exhaustive. It cannot be representative of any works not included in the study. However, this close examination of musical passages and their relationships with those of related works will provide analytical insight. As a result, the stylistic

⁵Joseph N. Straus, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge: Harvard University Press, 1990).

Arnold Schoenberg, *Style and Idea: Selected Writings of Arnold Schoenberg*, ed. Leonard Stein, trans. Leo Black. (London: Faber & Faber, 1975).

⁶ Much of the current literature on borrowing and allusion include some sort of discussion of a typology of references. In his article entitled, "The Uses of Existing Music: Musical Borrowing as a Field," Burkholder refers to his typology of references as a taxonomy, overtly making reference to the literature of taxonomic science.

J. Peter Burkholder, "The Uses of Existing Music: Musical Borrowing as a Field," *Journal of the American Musicological Society*, Vol. 54, No. 2 (Summer 2001): 851-870.

See also Thomas Christensen, "Bach among the Theorists," in *Bach Perspectives: Creative Responses to Bach from Mozart to Hindemith*, Volume 3 (Urbana-Champaign: University of Illinois Press, 2003), 23.

commonalities perceived by the selected composers will no longer be discussed in vague terms but based on concrete examples found in the music. Additionally, this proposed twentiethcentury taxonomy is helpful in that it differs from traditional conceptions of twentieth-century counterpoint in which jazz and the influence of J. S. Bach do not figure prominently. Finally, this study will close with general conclusions regarding the relationship between jazz and posttonal music as well as their appropriations of counterpoint.

Counterpoint as a vehicle

Counterpoint has always been a vehicle of allusion, recomposition, and innovation. Beginning as early as the days of the motet, contrapuntal composers such as Ockeghem and Josquin borrowed from and referenced the compositions of their predecessors. Moreover, a tradition of recomposition was bequeathed to twentieth-century composers by the hands of Bach, Vivaldi, Beethoven, and Liszt. As evidenced by the work of madrigalists such as Rore, Willaert, Vicentino, and Gesualdo, counterpoint has historically been a suitable theatre for innovation via chromatic and harmonic experimentation. Bach himself is known for his chromatic eccentricities which are properly reconciled with the laws of tonality. Rhythmic eccentricities, cross rhythms, and syncopation is also found in Bach and other great contrapuntal works of the past. In addition, the contrapuntal art has historically been allied with variation and the improvisational genres of toccatas and fantasies. When considering precedents to be found in Western music history, it is no surprise that in the twentieth century, Baroque or Bach-inspired counterpoint is at times an object of allusion, at others recomposed, and freely integrated with the vocabularies of both post-tonal and jazz musics. Not only are twentieth-century artists attracted to the pure dynamism of the contrapuntal art, according to Searle, they have much in common with this tradition than is ordinarily recognized:

...we are living a transitional or predominantly contrapuntal period, in some ways parallel to the age between Palestrina and Bach; the diatonic system of the 18th and 19th centuries has ceased to exist in its old form, but there is no complete break with the past; elements of the old music have continued to survive in the new , and we have a different conception of tonality, based on the twelve note scale.⁷

Hence, a long standing contrapuntal tradition of allusion, recomposition, and innovation makes a seamless transition into the twentieth century, whose artists possess ideals likened to those of Palestrina and Bach. Hanns-Peter Schmitz verifies that the jazz idiom has its own affinities with the Baroque tradition:

In observing contemporary culture, it is accordingly a matter of actively seeing yesterday in today – the old changed into a new form – and of establishing the overall relationship. If we look at the complex of modern music in this light, we find on one hand principles at work which lend Baroque music its characteristic stamp and, on the other hand, we ascertain elements that broke with particular force into art music from European and non-European folklore.

Among these elements, jazz assumes a privileged position. Its influence is not to be overlooked in the creative work of a large number of European and American composers. It is a decided and not accidental fact that the contemporaneity of the beginnings of modern music, the birth of the jazz style, and the intensive revival of early music point to related elements, to relationships between jazz and the Baroque musical art which are worthy of more detailed investigation...⁸

Schmitz confirms that the contemporaneous movements of early music revival, which includes

the "back to Bach" movement; post-tonality; and jazz produced a body of works worthy of

closer study.

⁷ Humphrey Searle, *Twentieth Century Counterpoint: A Guide for Students* (New York: John de Graff, Inc., 1954), 6.

⁸ Hanns-Peter Schmitz and Dominique-Rene de Lerma, "Baroque Music and Jazz," *The Black Perspective in Music*, Vol. 7, No. 1 (Spring 1979): 75-80.

Compositional Paradigms

Bach is heralded as the progenitor of many a compositional paradigm by several modern composers and jazz musicians. According to Alcedo Coenen, the values of a compositional paradigm include "assumptions about what music is or should be, what the fundamental entities of music are, how music should be performed or listened to...."⁹ According to Coenen, the label of compositional paradigm can be applied to a group of works within an individual composer's repertoire, a composers entire output, a combination of composers, and a combination of styles.¹⁰ In this study, the manner in which the three styles represented by the movements of the Bach revival, post-tonality, and jazz come together to as a compositional paradigm sa being similar to Kuhnian paradigms:

The Structure of Scientific Revolutions analyzes the history of science as a sequence of paradigms and paradigm shifts ("scientific revolutions"). During a period of 'normal science,' a scientific community tries to solve problems in accordance with a specific view, which is its 'truth.' But at certain points in history one can see that an unsolvable problem (an 'anomaly') comes up, which can only be solved by assuming another view, another truth, another paradigm. The way in which this paradigm shift takes place cannot be rational, according to Kuhn. Therefore he calls them revolutions, a kind of psychological battle between scientific communities, where the decision depends on psychological and sociological forces. The *beliefs* of scientists are changed during scientific revolutions.¹¹

Coenen states that in the realm of music theory and musicology, Kuhn's "community" can be interpreted as "a 'compositional unity,' which may vary from a single work to a stylistic movement."¹² A look at music history reveals many a "revolution" or "paradigm shift" as musical styles give way to new burgeoning styles. A look at individual composers' lives such

⁹ Alcedo Coenen, "Stockhausen's Paradigm: A Survey of His Theories," *Perspectives of New Music*, Vol. 32, No. 2 (Summer 1994), 202.

¹⁰ Coenen, 204.

¹¹ Coenen, 202.

¹² Coenen, 204.

as Igor Stravinsky reveals at least one "revolution" that impacts how he or she composes. We will see shortly in this study that as post-tonal and jazz musicians encounter one other as well as embrace music of the past, a paradigm shift occurs which both impacts compositional thinking and produces a unique body of works.

Historical evidence shows that it is not simply Bach's music in general, but specifically Bach counterpoint that is so widely revered. Historically, mastery of counterpoint has been a rite of passage for composers and individual jazz artists alike. Christensen observes this rite of passage as the underlining philosophy in Kirnberger's writings: "'Pure composition' was a necessary component to all good music, no matter what the genre, what the style."¹³

The Engagement of Philosophy of Science

The engagement of these three musical idioms of post-tonality, jazz, and Bach counterpoint occurred during a time in which several cultural currents were at work. One of the most influential was technology and scientific advancement. On a scale like no other in history, twentieth-century technology allowed post-tonal and jazz composers to connect with works by composers of the past, by composers in other parts of the country, by composers from other walks of life, and by composers in other parts of the world. Not only was there greater access to other musics, there was greater access to a variety of ideas, philosophies, and scientific thought itself. As a result, post-tonal and jazz musicians began to be more cosmopolitan and systematic in how they composed and described their music. In his discussion of Stockhausen's "theories", Coenen asserts: "Therefore his 'theories' should not be approached as music theory, but from a broader perspective in which philosophy, theory, and compositions have a place. Stockhausen's thinking has to be considered a musical paradigm."¹⁴ The broader thinking and resources of

¹³ Christensen, 41.

¹⁴ Coenen, 201.

post-tonal and jazz musicians prompts musical analysts to analyze the music itself from broader perspectives. Hence, an engagement of the music here also engages the philosophy of science. Moreover, as we study music that as Burkholder says "crosses periods and traditions," analysts do find a need for additional tools. As we will see shortly, Burkholder embraces the concepts of taxonomy and evolution from the philosophy of science as a means of creating a "typology of borrowing procedures" by composers.

Borrowings Between Paradigms

Since the advent of the twentieth century, modern composers and jazz artists have shared a mutual admiration that expresses itself in the frequent borrowing of idioms on both sides. The list of modern works that employ jazz idioms, just from the Jazz Age alone, is extensive. It includes the following:

Concerto for Piano and Orchestra (1917); Krazy Kat (1922), ballet
Suite 1922 ; Ragtime (Wohltemperiert)
Ragtime du Paquebot in Parade (1916)
Le Creation de Monde; Le Boeuf sur le toit, (combines ragtime with South
American song); Three Rag Caprices
Adieu New York (1919)
Concertino, Le Roi David, oratorio, and Prelude and Blues for quartet of
chromatic harps, Trois Blues
Sonata syncope for piano, Suite for violin and piano
Three Penny Opera, Mahagonny
Jonny spielt auf (1926)
Jazz Suites (1938)
"Jazzy" movement from <i>Three Moods</i> for piano (1921), <i>Music for the Theatre</i>
(1925), and the Piano Concerto (1926)
"Blues" movement from the Sonata for violin and piano
Ragtime for Eleven Instruments (1918); Piano Rag Music (1919)

Table 1-1: Notable modern music borrowings from the jazz idiom during the Jazz Age.

After the Jazz Age, numerous modern composers such as Stravinsky and Copland continued to

include jazz idioms in their works.

Likewise, the list of jazz works which borrow classical idioms is extensive, including:

Table 1-2: Notable Jazz borrowings from the classical idiom.

Paul Whiteman	"Kitten on the Keys"
George Gershwin	Rhapsody in Blue; Porgy and Bess, opera
W.C. Handy &	The Evolution of the Blues, which is described as a "symphonietta in Jazz
Joseph Nussbaum	style"; ¹⁵
Louis Armstrong	Quotations from Verdi's <i>Rigoletto</i> in his solo from <i>New Orleans Stomp</i> ¹⁶ and a
	sequential treatment of the "Tristan Chord" in Blue Again
Earl Hines	Quotation of Rachmaninoff's Prelude in C-sharp Minor in his accompaniment
	figures to Wild Man Blues ¹⁷
Charles Mingus	Quotation of Rachmaninoff's Prelude in C-sharp Minor in All the Things You Are
Fat Waller	Russian Fantasy, which also references the same Rachmaninoff prelude
James P. Johnson	Harlem Symphony
Duke Ellington	A New World Comin', which has been described as suggesting "the stylistic traits
	that can be heard in the rhapsodic piano work of Romantic composers like Franz
	Liszt or Sergei Rachmaninoff ^{"18}
Irving Berlin	<i>Mysterious Rag</i> which shows affinities with Franz Liszt's Rhapsody ¹⁹
Bix Biederbecke	Candlelight, In the Mist

Moreover, in the 1920s and 1930s, symphonic jazz emerges as a new, independent, yet short-

lived genre. In the Post-World War II era, the works of jazz musicians such as Charles Mingus,

Charlie Parker, Miles Davis, and Dave Brubeck continued to exhibit the impact of modern

music on jazz.

The personal interactions between modern and jazz musicians are numerous, including:

Ravel's highly celebrated visit with Paul Whiteman and Bix Biederbecke; James P. Johnson's

correspondence with William Grant Still; Aaron Copland's interactions with Duke Ellington, as

well as his musical collaboration with Benny Goodman; and Gershwin's encounters with

¹⁵ Arnold Shaw, The Jazz Age: Popular Music in the 1920s (New York: Oxford University Press, 1987), 152.

¹⁶ Arnold Shaw, *The Jazz Age: Popular Music in the 1920s* (New York: Oxford University Press, 1987), 152.

¹⁷ Jeffrey Taylor, "Louis Armstrong, Earl Hines, and 'Weather Bird,'" *The Musical Quarterly*, Vol. 82, No.1 (Spring 1998): 9.

¹⁸ John Howland, "*Ellington Uptown*": *Duke Ellington, James P. Johnson, and the Birth of Concert Jazz* (Ann Arbor: University of Michigan Press, 2009), 157.

¹⁹ Karl Koenig, ed., *Jazz in Print (1856-1929): An Anthology of Selected Early Readings in Jazz History* (New York: Pendragon Press, 2002), 87.

modernists from Ravel to Cowell to Schoenberg.²⁰ The details that are often lost in the larger scheme of biographical narrative include: Stravinsky and Boulanger's individual studies of jazz scores; Copland's following of Duke Ellington, Fats Waller, Charles Mingus, and Bud Powell; Rachmaninoff's following of Art Tatum; the analytical discussions between Bix Biederbecke and Frank Trumbauer as they listen to recordings of Delius, Debussy, Ravel, Holst and Stravinsky; and Charlie Parker's improvising a solo over the *Firebird Suite* on a phone call to Charles Mingus.²¹

These interactions between modern and jazz musicians, both personal and artistic, should no longer be neglected and relegated to the realm of interesting footnotes. These interactions should serve as the basis for our analyses of both musics and also for their significance to the individual styles of the composers engaged. The music that a composer or an artist chooses to engage analytically and compositionally is very telling. It implies a certain compatibility with his own personal style or/and that there is a specific intent in mind. It is worth considering whether modern music and jazz have a certain compatibility that stems from the sharing of a modernist impulse.

Perceptions of Jazz during the Modernist Era

At various times throughout the twentieth century, there has been a widely held conception that jazz shares many affinities with modern or post-tonal music. Firstly, there is the perception of American popular media, especially of the 1920s and 30s, that characterizes jazz

²⁰ Shaw, 152. Howland, 157.

²¹ Arnold Shaw, *The Jazz Age: Popular Music in the 1920's* (New York: Oxford University Press, 1987). See also Howard Pollack, *Aaron Copland: The Life and Work of an Uncommon Man* (New York: Henry Holt and Company, 1999).

Gene Santoro, *Myself When I Am Real: The Life and Music of Charles Mingus* (Oxford: Oxford University Press, 2000).

as modernist.²² Secondly, there is the perception of 1920s and 30s German critics who label everything from the avant-garde to jazz to popular operetta as "entartete musik," meaning degenerate music.²³ In short, this label serves as a wholesale indictment of modern culture. Although this term is derogatory in nature, it does indicate that both avant-garde music and jazz seem to communicate a modernist perspective in German eyes as well. Among the defamed composers and theorists to be found in German criticism of this time are: Schoenberg, Webern, Hindemith, Stravinsky, Weill, Krenek, Weissman, Berg, and Adorno.

Lastly, we must consider the commentary of modern and jazz musicians themselves. A telling example is Paul Whiteman characterizing one of his famous symphonic jazz concerts as "An Experiment in Modernist Music." This statement not only characterizes jazz as modern but also as being at the forefront of innovation. In addition, Ravel provides insight into how the jazz idiom provides suitable material that advances the agenda of the modern musician:

...Musicians have asked me how I came to write "blues" as the second movement of my recently completed sonata for violin and piano. Here again while I adopted this popular form of your music, I venture to say that nevertheless, it is French music, Ravel's music, that I have written. Indeed, these popular forms are but the materials of construction, and the work of art appears only on mature conception where no detail has been left to chance. Moreover, minute stylization in the manipulation of these materials is altogether essential. To understand more fully what I mean by the process to which I refer, it would be sufficient to have these same "blues" treated by some of your own musicians and by musicians of European countries other than France, when you would certainly find the resulting compositions to be widely divergent, most of them bearing the national characteristics of their respective composers, despite the unique nationality of their initial material, the American "blues." Think of the striking and essential difference to be noted in the "jazz" and "rags" of Milhaud, Stravinsky, Casella, Hindemith, and so on. The individualities of these composers are stronger than the materials appropriated. They mould popular forms to meet the requirements of their

²² Karl Koenig, ed., *Jazz in Print (1856-1929): An Anthology of Selected Early Readings in Jazz History* (New York: Pendragon Press, 2002).

²³ Erik Levi: "Entartete Musik", in *Grove Music Online. Oxford Music Online,* http://www.oxfordmusiconline.com/article/grove/music/entartetemusik (accessed April 2011).

own individual art. Again—nothing left to chance; again—minute stylization of the materials employed while the styles become as numerous as the composers themselves.²⁴

The individuality of modern composers has certainly been one of the stumbling blocks in numerous attempts to characterize the modern era. However, in spite of the diversity among modern composers, one shared characteristic is that they turn to some of the same source material, including jazz, and adapt it to their sensibilities. When asked if his Violin Sonata exhibits the same influences as his earlier Piano Concerto, Ravel retorted: "What is being written today without the influence of Jazz?"²⁵ In support of this assertion, recent studies reveal other modern composers such as Bartok, Ives, and Varese who have done some experimentation although they are not widely known for explorations of jazz within their idiom. For example, in "Bartoks Urteil Uber den Jazz" [Bartok's judgment of jazz], Jurgen Hunkemoller identifies elements of jazz in Bartok's Contrasts (commissioned by Benny Goodman), *Mikrokosmos*, and the Concerto for Orchestra.²⁶ Moreover, ragtime rhythms have been located in Charles Ives' Three Page Sonata and Concord Sonata. In "Charles Ives and His World" James Peter Burkholder asserts: "He speaks in many languages, in refinements of tone quality, overtones, polyrhythms, atonality, metrical changes of a surprising nature, and complicated jazz rhythms."27

The Influence of Jazz upon Post-tonal music

Not only is jazz considered by certain modern composers such as Ravel as suitable source material and as an influential style, it is considered as a potential catalyst for the

²⁴Arbie Orenstein, *A Ravel Reader: Correspondence, Articles, and Interviews* (New York: Dover Publications, Inc., 1990), 46.

²⁵Orenstein, 494.

²⁶ Jurgen Hunkemoller, "Bartoks Urteil Uber den Jazz" [Bartok's judgment of jazz], *Die Musikforschung* 38/1 (January-March 1985): 27-36.

²⁷ James Peter Burkholder, *Charles Ives and His World* (Princeton: Princeton University Press, 1996), 325.

emergence of a uniquely American modernist expression. Aaron Copland states: "When I heard jazz played in Vienna, it was like hearing it for the first time. It was then that I first began to realize the potentiality of jazz material for use in serious music."²⁸ Howard Pollack adds:

Without a vital concert tradition to build on, Copland concluded that America's serious composers might well look to their folklore and like Carpenter, Gershwin, and others, he considered jazz and popular music a kind of folklore and an especially appealing one.²⁹

Returning to Ravel's commentary, we are prompted to go a step further than envisioning an emerging new genre. Ravel encourages us to reconsider the distinctions between classical and jazz altogether. Ravel asserts:

I could sit down and play you some French music written about 1849 that you would take for jazz, so characteristic is it, so syncopated in rhythm, *neanmoins*, it retains a French flavor. What is more, it is considered as classical music.³⁰

Here Ravel is making reference to nineteenth century composer Louis Moreau Gottshchalk who employs Latin-American and Creole rhythms in his works. Ravel interestingly associates jazz's syncopation with the character of French classical music. Ravel's commentary raises questions regarding what defines jazz. Is there a threshold that determines where jazz begins and ends?

Ravel was not alone with his blurring of the distinctions. According to Deborah Mawer, both Milhaud and Stravinsky perceived commonalities between the seemingly disparate styles they brought together. Mawer maintains: "Both Milhaud and Stravinsky assimilated aspects of jazz within their music, and discovered the close relationship between the textures and

²⁹ Pollack, 113.

²⁸ Howard Pollack, *Aaron Copland: The Life and Work of an Uncommon Man* (New York: Henry Holt and Company, 1999), 113.

³⁰ Orenstein, 390.

rhythmic movement of baroque music and jazz."³¹ Mawer considers Milhaud's borrowings from jazz and Brazilian popular music as "misreadings" of the popular styles themselves.³² She cites Joseph Straus' *Remaking the Past*, making a case for its applicability to other musical styles such as jazz. In the following commentary, there is a sense of this type of "misreading," as Milhaud asserts that the borrowings from jazz by modern composers is very much in keeping with the precedent set by earlier composers:

...Jazz came to us as a good shock—like a cold shower when you have half asleep with ennui. It roused us electrically. All the young artists went every night to hear it played...Chopin was inspired by the Mazurka, Bach by the sarabande—always we find great composers responding to the traditions of the times. Why should we not look upon our present day dances as the source of inspiration for our new music... I think the American composer will evolve something typically American and vital if he will turn his ear to the jazz inspiration, using that for his tradition and basis. Of course, he will have to transform it—to mold it into the form he wishes. But I believe that will be the starting point for a new American school of music.³³

It is interesting to note that Milhaud sees a new school of American modern music emerging out of misreadings of jazz, which he characterizes essentially as dance music. This is especially significant, when considering, as stated by Mark Tucker, that jazz itself evolved from African-American misreadings of "a varied repertory that included marches, dance music (two steps, quadrilles, waltzes, polkas, schottisches and mazurkas), popular songs, traditional hymns and spirituals."³⁴ Paul Hindemith agrees with Milhaud's assertion. His argument includes the vivid

³¹ Mawer, 2.

³² A misreading is essentially a revision of an existing work. For Joseph Straus, who applied this Bloomian concept to music, the "existing work" in question is one from the past. In this study, the existing work can be contemporaneous as well. Moreover, taking Burkholder's theories into consideration, genres and styles are included as potential objects for misreading. When a composer misreads an existing work(s), genre, or style; his objective, regardless of his original compositional paradigm or musical style, is to assert "the validity" of his compositional vision. Joseph Straus: "A misreading is distinguished from a simple reading in its power to revise." Mawer, 14, 181, 182.

Straus, 14.

³³ Karl Koenig, ed., *Jazz in Print (1856-1929): An Anthology of Selected Early Readings in Jazz History* (New York: Pendragon Press, 2002), 235.

³⁴ Mark Tucker, "Jazz" in Grove Music Online. Oxford Music Online,

http://www.oxfordmusiconline.com/article/grove/music/jazz (accessed April 2011).

image of a "present day" Bach who would borrow from jazz. Regarding his mixture of jazz, counterpoint, and modernism in *Ragtime for Orchestra* (1921), Hindemith maintains: "Do you think that Bach is turning in his grave? On the contrary: if Bach had been alive today he might very well have invented the shimmy or at least incorporated it in respectable music. And perhaps, in doing so, he might have used a theme from the *Well-Tempered Clavier* by a composer who had Bach's standing in his eyes."³⁵ The idea of a twentieth-century Bach involved in a dance idiom is echoed by Andre Hodeir. In *Jazz: Its Evolution and Essence*, Hodeir posits a similar image in his discussion of the "rhythmic counterpoint" between drummer Max Roach and Charlie Parker: "If Johann Sebastian Bach had been a jazzman, he undoubtedly would have had a hard time getting along with Schoenberg at the piano and Bartok on drums!"³⁶

Ragtime as Jazz in Post-Tonal music

Although ragtime is generally considered by scholars to be a precursor to jazz and not a form of jazz, many modern composers such as Hindemith and Ravel, use the terms ragtime and tango interchangeably with the term "jazz." The same is true in the popular media from that time.³⁷ This perception is echoed by Carl Engel who asserts regarding the relationship

[&]quot;The foundations of jazz were established by black Americans in this urban environment before the music had a name, or when it was still referred to as ragtime or 'ratty' music. The process unfolded as musicians gradually developed new ways of interpreting a varied repertory that included marches, dance music (two steps, quadrilles, waltzes, polkas, schottisches and mazurkas), popular songs, traditional hymns and spirituals. What might be called a *nascent jazz sensibility* arose from the loosening of performance strictures and the adoption of an individualistic, defiantly liberating attitude that has remained at the core of this musical tradition...Rhythms, for example, gradually may have come to be interpreted more freely than in earlier 19th century marches, ragtime and cakewalks. Phrases were stretched out and either played in a more relaxed manner or syncopated more vigorously, not just in one instrumental part but in two or more simultaneously. Drummers 'jazzed up'—that is, enlivened—simple duple and triple metre by introducing syncopated patterns and phrasing over bar lines. Players began embellishing and ornamenting melodies, inventing countermelodies, weaving arpeggiated lines into the texture and enriching diatonic harmonies with blue notes."

³⁵ Gunter Ludwig, *Ludas tonalis*, Wiener Urtext Edition (Schott: Universal Edition, 1989), iii.

³⁶ Andre Hodeir, Jazz: Its Evolution and Essence, rev.ed., trans. David Noakes (New York: Grove, 1979), 187.

³⁷ Karl Koenig, ed. Jazz in Print (1856-1929): An Anthology of Selected Early Readings in Jazz History (New

York: Pendragon Press, 2002), 235.
between jazz and ragtime: "One cannot say when ragtime stopped and jazz began. One should not try to, for, as already stated, they are the same thing in different phases. 'Jazz completed a process that ragtime began.'"³⁸ This perception could possibly be attributed to the fact that the late 1910s was a transitional period. During this time, ragtime was undergoing profound changes. Badger states: "...between 1908 and 1919 certain subtle modifications of popular ragtime-based rhythms and tonality, along with an increasing acceptance of extemporation, gained such widespread recognition that by 1919 it was common in the United States and Europe to speak of the existence of a new music—jazz."³⁹ This was a time in which syncopated orchestras abounded. James Reese Europe, along with Will Marion Cook and Sidney Bechet, is a transitional figure who represents this period. Badger describes the repertoire of Europe's ensembles:

The music Europe composed and arranged for the orchestra included marches, rags, current popular tunes and musical theater songs, and excerpts from classical pieces—the sort of material that the public expected from concert bands like John Phillip Sousa's— but he increasingly featured compositions by Black composers and adaptations of the traditional spirituals.⁴⁰

Moreover, Europe's collaborations with the husband-wife dance team, Vernon and Irene Castle, generates a dance craze around the tango, maxixe, and the foxtrot. To Europe, the foxtrot is very closely associated with the blues. It is encounters with these dances and the music associated with them that shaped several modern composers' conception of jazz. Hence, in this study, allusions to the proto-jazz musical styles of ragtime and tango will be treated the same as allusions to jazz. Carol Lems-Dworkin states regarding the similarity among African

³⁸ M. Robert Rogers, "Jazz Influence on French Music," *The Musical Quarterly*, Vol. 21, No. 1 (January 1935): 53-68.

³⁹ R. Reid Badger, "James Reese Europe and the Prehistory of Jazz," *American Music*, vol. 7, no. 1 Special Jazz Issue (Spring 1989): 50.

⁴⁰ Badger, 52.

derived dances: "Even though the cakewalk, tango and habanera use entirely different dance steps, they nevertheless share the same basic, underlying rhythm, no matter whether their associated musics are fast or slow."⁴¹

The Second Viennese School and Jazz

In the current scholarship, there are virtually no connections made between the Second Viennese School and the world of jazz. This is for good reason. In *Style and Idea*, Schoenberg discounted jazz for its "rhythmic and other drolleries."⁴² Nevertheless, through personal interactions which included friendly tennis matches, Schoenberg came to regard Gershwin's artistry very differently. He later described Gershwin, in an interview, as a "serious composer" and an innovator. Moreover, when asked for instruction in four-part counterpoint, in a letter, he told Gershwin that there was nothing he could possibly teach him about composition. Schoenberg's interaction with jazz musicians does not end there. He later gives a lesson to Dave Brubeck that reportedly did not end well.⁴³

Years earlier, before Gershwin's interactions with Schoenberg, Gershwin was introduced to Alban Berg. They met for the first time on May 3, 1928. At the center of this encounter was Gershwin's first hearing of Berg's *Lyric Suite*. The encounter culminates with Berg giving Gershwin a photograph of himself inscribed with notes of what we now know as the octatonic collection from the opening of the second movement of his *Lyric Suite*. Derrick Puffett provides us with evidence that the admiration between the two men was mutual as he recounts the "famous conversation":

⁴¹ Carol Lems-Dworkin, Africa in Scott Joplin's Music (Evanston, IL: Carol Lems-Dworkin, 1991), 22-3.

⁴² Arnold Schoenberg, *Style and Idea: Selected Writings of Arnold Schoenberg*, ed. Leonard Stein, trans. Leo Black (London: Faber & Faber, 1975), 230.

⁴³ Stephen A. Crist, "The Role and Meaning of the Bach Chorale in the Music of Dave Brubeck," in *Bach Perspectives, Volume 5 Bach in America* (Chicago: University of Illinois Press, 2003), 211.

Gershwin: How can you possibly like my music when you write the kind of music you do? Berg: Music is music.⁴⁴

In his article "Reflections upon the Gershwin-Berg Connection," Allen Forte raises the question of Alban Berg's influence upon George Gershwin. This study will return to Forte's findings in the next section.

The Influence of Post-tonal Music on Jazz

While composers debated the future of American modern music, Paul Whiteman, James

P. Johnson, and others pushed for the acceptance of a new genre called symphonic jazz.

Whiteman merely represented the prominent tip of the symphonic jazz iceberg. By July of

1927, concert-style symphonic jazz was just beginning to have widespread national impact.

Over the remainder of the decade and into the early 1930s, this trend gained far greater clarity

and cultural dissemination as a good number of white and black contributors emerged...

Nevertheless, the critical reception of Duke Ellington's music in the 1930s and 1940s reveals a gradual shift in the ideological basis of symphonic jazz away from its Whitemanesque roots in (white) New York entertainment toward the hope of a 'serious' concert work idiom based on the elevation of 'authentic' African-American hot jazz. While Ellington's high profile concert jazz activities of this period offered a major African-American redefinition of symphonic jazz, so did the lesser-known extended compositions of Ellington's early musical mentor, James P. Johnson...⁴⁵ It is in 1932 that James P. Johnson turned decisively from his success in the jazz music

industry to engage the world of American modern music. Howland describes the state of the art

music community in the United States:

On one end of this spectrum, academic studies of interwar American art music have confined themselves to a now-canonical pool of figures and themes centered around both the immigration of European modernists to the United States and the generation of American composers who

⁴⁴ Derrick Puffett, "Berg and German Opera," in *The Berg Companion*. Douglas Jarmon, ed. (Boston: Northeastern University Press, 1989), 216.

⁴⁵ John Howland, "*Ellington Uptown*": *Duke Ellington, James P. Johnson, and the Birth of Concert Jazz* (Ann Arbor: University of Michigan Press, 2009), 5.

had established themselves as equals on the field of international modernism (Charles Ives, Aaron Copland, Virgil Thomson, Henry Cowell, Charles and Ruth Crawford Seeger). ⁴⁶

During this time, Johnson began training himself in the classical tradition. He studied Gradus Ad Parnassum, strict counterpoint, Bach preludes and exercises, and expresses aspirations for studying impressionism, atonality, and polytonality. Howland states: "In other words, despite his significant career, James P. Johnson's desire for 'education' [in theory and classical composition] is colored by a class-based need for legitimatization in the world of classical art music."⁴⁷ Although he does not have access to training in modern music, he is certainly open to its benefits for his artistry. Notwithstanding, to Johnson's credit are symphonies, orchestral suites, symphonic poems, piano concertos, hybrid jazz-classical piano character pieces, orchestrations of his early ragtime works, a ballet, choral works, two operas, a string quartet and other compositions. Among his more notable works are: Harlem Symphony, Concerto Jazz. a Mine, American Symphonic Suite, an incomplete Symphony in Brown, Manhattan Street Scene (for ballet), Sefronia's Dream: Negro Fantasy (for ballet), Symphonic Dance: Carolina Shout, Liberty: A March Fantasia (1917), a one act opera De Organizer; and Yamkekraw: A *Negro Rhapsody.* Among the unique characteristics of these works are their borrowings from his own jazz works and musical theater, their focus on African-American topics, and unlike Ellington, their especial design for orchestral-theatre ensembles.

Although he was not as forthcoming about his interests in modern music and music of the past, there are accounts of Ellington's familiarity with Western art music.⁴⁸ This familiarity found expression in works with titles that allude to the classical style such as *Symphony in*

⁴⁶ Howland, 242.

⁴⁷ Howland, 200.

⁴⁸ Howland, 275. "...Ellington's casual absorption of the sound, character, and gestural rhetoric of the "classical" idiom is likely akin to James P. Johnson's early stride piano adaptations of the 'orchestral effects' and type of 'abrupt change' that he 'heard Beethoven do in a sonata.""

Black (1935), *Concerto for Cootie* (1940), *The Far East Suite* (1965), and *New Orleans Suite* (1970). It is works such as *Concerto for Cootie*, which will be discussed later in this study, that exemplify an engagement of the three idioms of post-tonality, jazz, and counterpoint. Dan G. Hoffman confirms the hint of polyphony and the classical idiom in the work of Ellington:

"Nobody's Sweetheart" and "China Boy" seem to convey an openheartedness, an enthusiasm, and sometimes the sense of the musician's struggle to surpass himself. But on the whole this improvised polyphony, like the polyphony of Bach, is abstract, while the Ellington combination of arrangement and improvisation may be called impressionistic.⁴⁹

Moreover, in his 1945 article, "The Folk Art of Jazz," Dan Hoffman asserts that the Ellington style of "integrated polyphony" along with "improvised individual expression" and "the Ellington practice of improvised solos against dynamic, intricately arranged backgrounds" as the very ways that jazz could "extend its scope without betraying its essence."⁵⁰

In his article "Reflections upon the Gershwin-Berg Connection," Allen Forte raises the question of Alban Berg's influence upon George Gershwin. He suggests that Gershwin's ownership of a recording of the *Lyric Suite* and a score of *Wozzeck*, may be indicators of an interest in Berg's music. Forte then makes a comparison between lullabies found in *Wozzeck* and *Porgy and Bess*. He establishes that the connection between the two composers lies primarily in their mutual employment of the octatonic and pentatonic collections. Gershwin's uses of the octatonic as well as the pentatonic collections not only identifies the influence of Berg, but also the influences of Stravinsky's "Petrushka chord" and Scriabin's "Mystic Chord." In conclusion, Forte asserts that Gershwin's repertoire not only exhibits a deep interest in the avante-garde but also a true understanding of Berg's music. Forte's third conclusion is the most striking:

⁴⁹ Dan G. Hoffman, "The Folk Art of Jazz," *The Antioch Review*, Vol. 5, No.1 (Spring 1945): 119.

⁵⁰ Hoffman, 119.

Gershwin's interest in the avante-garde music of the post World War I period gives strong hints of the paths he might have taken had he lived to pursue his career. As we reflect upon this possibility, it is important to bear in mind that Gershwin was a modernist in every positive sense of that current catchword.....I do not think that Gershwin would have been a composer of twelve tone music (after Schoenberg), but I believe that he would have adapted harmonic procedures of free atonality (after Berg) and perhaps linear features of modified serialism (after Stravinsky), although without sacrificing either his tonal roots or his commitment to music that was accessible to a larger public.⁵¹

As the bebop era ensues, Charlie Parker in a 1947 article for *Downbeat* characterizes bebop as "advanced modern music."⁵² Paul Douglas Lopes adds: "Boppers like Parker also made reference to modernist and experimental classical composers as role models."⁵³ Additionally, Lopes traces the modernist impulse as the Swing Era transcends into Bebop:

While bebop modernists attacked the politics of jazz traditionalists, the core of their aesthetic ideology was an avant-garde modernism. As the historian Scott DeVeaux

aesthetic ideology was an avant-garde modernism. As the historian Scott DeVeaux (1997) argues, often the various associative meanings of rebellion in bop overshadow how this style was a logical extension of the modernist ethos of older swing musicians like Coleman Hawkins. While DeVeaux is absolutely correct in redirecting our attention to the modernist ethos of professional musicians, bebop still represented in its aesthetic ideology a more radical avant-garde orientation.⁵⁴

Additionally, we have commentary from jazz musicians like Thelonious Monk, who shares in a 1949 article for *The New Yorker*: "We liked Ravel, Stravinsky, Debussy, Prokofieff, Schoenberg and maybe we were a little influenced by them."⁵⁵ Monk's use of the term "influence" implies a relationship between the two musics that goes deeper than mere borrowing.

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⁵¹ Allen Forte, "Reflections upon the Gershwin-Berg Connection," *The Musical Quarterly*, vol. 83, No. 2 (Summer 1999): 168.

 ⁵² Paul Douglas Lopes, *The Rise of a Jazz Art World* (Cambridge: Cambridge University Press, 2002), 209.
⁵³ Lopes, 209.

 $^{^{55}}$ Lopes, 209.

⁵⁴ Lopes, 208. ⁵⁵ Lopes, 209.

Prospects of a Third Stream

Hence, there are indications from critics and composers on both sides of the Atlantic, that during the first of half of the century, modern music and jazz were perceived as expressions of a modernist aesthetic. During the 40s and 50s, Copland eagerly watched the history of jazz unfold. He believed so strongly in the relationship between the two musics that during this time he predicted the convergence of classical and jazz.⁵⁶ By the end of the 1950s, however, he retracted that prediction, still believing that composers and musicians on both sides will continue to borrow and that there will always be overlaps. Gunther Schuller provides a novel metaphor concerning the intermingling of the two musics:

The entire history of music, particularly European music, is like the genetic process itself, a prolonged history of musical intermarriage, acculturation, crossbreeding, fusing, and new symbiotic relationships, always subject to further renewal and genetic regeneration.⁵⁷

His use of a genetic metaphor further supports the prospect of assembling a taxonomy for the musical works in this study.⁵⁸ In addition, Schuller clarifies the concept of the Third Stream,⁵⁹ addressing misconceptions that may have impeded its widespread dissemination:

The idea embedded in the basic philosophy of Third Stream was its concept of an offspring begotten from the marriage of two equal mainstreams—and I emphasize the word "equal. These two musics could also be left to continue to develop in their own organic ways without benefit of further fusion if they so chose; that is, to remain discreet and distinct. Today, the Third Stream is but one approach by which the two musics can find and meet each other on common ground.⁶⁰

The image Schuller creates of two compositional paradigms meeting one another on

"common ground," however, is not consistent with what Coenen describes as the behavior of

⁵⁶ Howard Pollack, *Aaron Copland: The Life and Work of an Uncommon Man* (New York: Henry Holt and Company, 1999), 113.

⁵⁷ Gunther Schuller, "The Influence of Jazz on the History and Development of Concert Music," in *New Perspectives on Jazz*, ed. David N. Baker (London: Smithsonian Press, 1990), 14.

⁵⁸ Taxonomic science often goes hand in hand with theories of biology and genetics.

⁵⁹ The term "Third Stream" was coined by Gunther Schuller from his 1957 lecture, denoting a blending of jazz with classical music.

⁶⁰ Schuller, 14.

compositional paradigms. As stated earlier, Coenen's compositional paradigms behave in ways consistent with Kuhnian paradigms. Rival paradigms, although sharing commonalities, are too antagonistic to actually join one another. A *new* paradigm has to be created based on convictions drawn from the two rival paradigms. In "The Influence of Jazz on the History and Development of Concert Music," Olly Wilson shares insights into how one musical tradition impacts another:

In order for an influence from one musical tradition to significantly affect the development of another musical tradition, it must modify the second tradition's view of itself at the conceptual level. It must propagate a significantly altered ordering of itself—a new paradigm.⁶¹

History has shown, unlike what Copland and Schuller anticipated, that this new paradigm appears more often in the form of individual compositions or combinations thereof rather than as a unified stylistic movement.⁶² In fact, these individual works or combinations thereof can be considered as paradigms unto themselves. This concept of compositional paradigms will be addressed later in more detail.

Defining the Modernist Aesthetic

It is yet unclear in the current literature whether jazz is indeed a rival paradigm or a popular manifestation of the modernist aesthetic. Critical and artistic commentary notwithstanding, in order for jazz to genuinely be an expression of the modernist aesthetic, it must possess an essential characteristic that is present in modern music. Leon Botstein states that the following strands of modernism were manifest by 1933:

⁶¹ Olly Wilson, "The Influence of Jazz on the History and Development of Concert Music," in *New Perspectives on Jazz*, ed., David N. Baker (London: Smithsonian Press, 1990), 30.

⁶² Coenen, 204. "A compositional paradigm can apply to an individual composer or to any combination of composers, styles, or even to a part of a composer's work. Kuhn's 'community' must be translated in a flexible way, and can be defined as a 'compositional unity,' which may vary from a single work to a stylistic movement."

(i)the Second Viennese School, made up of Schoenberg and his followers, particularly Berg and Webern; (ii) the French-Russian axis, dominanted by Stravinsky (iii) German Expressionism, which included Busoni and the young Paul Hindemith (iv) indigenous Modernisms, characterized by Ives in America, Bartok in Hungary, Szymanowksy in Poland, Janacek and Martinu in postwar Czechoslovakia and Carlos Chavez in Mexico; and (v) experimentalism characteristic of Haba, Varese and Cowell, that led to the exploration of microtonality, the embrace of ambient sound and the machine and a fascination with non-Western musics and technology.⁶³

Moreover, present among these strands is the incorporation of "rural and pre-modern traditions" as evident in Stravinsky, Bartok, and Szymanowsky.⁶⁴ Botstein also points out that these five strands continue to exert their influence in the second half of the twentieth century. In spite of this overwhelming diversity, Botstein, just as Joseph Straus and Peter Burkholder, defines modernism in the following way: "although it is applied loosely to disparate musical styles, what links its many strands is a common debt to the historical context which it emerged."⁶⁵

Therefore, modernism's true defining characteristic is its engagement with the music of the past. Under this definition, jazz's stylistic differences with its proposed counterparts are of no consequence. The true question is whether jazz artists are engaged with art music's past just as the modernists. Biographical details of individual jazz artists do indicate that this is the case. To this question we will return shortly. First, it must be noted, however, that it is not possible to fully engage the moderns without encountering their profound relationships with the past. For example, Schoenberg's compositions and theories can only be fully understood when interpreted in the light of his commentary concerning Bach, Mozart, Beethoven, and Brahms.

Secondly, it must be noted that in the midst of this shared engagement with the past among modern composers, there is a shared fascination with counterpoint. Among the most

⁶³ Leon Botstein: "Jazz" in Grove Music Online. Oxford Music Online,

http://www.oxfordmusiconline.com/article/grove/music/modernism (accessed April 2011).

⁶⁴ Ibid.

⁶⁵ Ibid.

revered early composers, Bach stands in the forefront. In fact, Schoenberg and the Second Viennese School have "made Bach a paradigm of the kind of motivic coherence so central to [their] compositional process."⁶⁶ In *Style and Idea*, Schoenberg proclaims that from J.S. Bach, he (and ultimately his students) learned the following: "(1.) Contrapuntal thinking i.e. the art of inventing musical figures that can be used to accompany themselves. (2.) The art of producing everything from one thing and of relating figures by transformation. (3.) Disregard for the 'strong' beat of the measure."⁶⁷ In this next statement made by Schoenberg, there is a clear elucidation of the relationship between Bach-style counterpoint and the theory of developing variation:

Our modern conception of music demanded clarification of the motivic procedures in both horizontal and vertical dimensions. That is, we do not find it sufficient to rely on the immanent effect of a contrapuntal structure that is taken for granted, but we want to be aware of this counterpoint in the form of motivic relationships....apply the same yardstick to Bach.⁶⁸

Moreover, by portraying their innovations as a culmination of the artistry of Bach and others, twentieth-century composers are able to establish their own "compositional autonomy."⁶⁹ Joseph Straus asserts that Schoenberg not only creates a link between his avant-garde expressions and his predecessors, he portrays Bach, Brahms, and others as "prototypical" Schoenbergs.⁷⁰ This engagement with Bach goes beyond the Second Viennese School to include the diverse styles of Stravinsky, Bartok, Hindemith, Copland, and Ives, among others. With many modern composers, we can find an engagement with counterpoint on some level especially that of Bach. Interestingly, Bach reception among post-tonal composers often goes

⁶⁶ Straus, Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition, 23.

⁶⁷ Arnold Schoenberg, *Style and Idea* (London: Faber and Faber Limited, 1975), 173.

⁶⁸ Straus, 47.

⁶⁹ Straus, 31.

⁷⁰ Straus, 31.

hand in hand with borrowings from jazz. Within the jazz tradition, there is a similar

engagement with the past and counterpoint. This shared engagement with the past can serve as

the basis for an argument for jazz being a modernist tradition.

Bach as a Model Paradigm for Post-tonality and Jazz

In "Bach among the Theorists," Thomas Christensen examines the theoretical writings

of Bach's pupils and "associative" pupils in order to get a sense of a Bachian theory. He makes

the following statement which seems to be applicable to Bach reception in general in both

modern music and jazz:

... their writings reveal the real enigma Bach the man posed after mid-century, and the difficulty in interpreting the significance of his compositional legacy. Having written almost nothing but a few aphoristic comments concerning his views on music to guide them, it remained for theorists to interpret Bach for themselves. Yet this proved to be not an easy task, for Bach seemed to be many things to each observer. It was possible to find something in his compositions to justify nearly any point of view.⁷¹

To call Bach an enigma is an understatement. His compositional legacy, even to this present

day, seems to be open to interpretation. As Christensen closes his article, he continues:

Bach's music invites conflicting interpretations, being a quodlibet of different styles and functions, and all theorists who cite his music in their arguments—in the eighteenth century as well as today—can find justification somewhere... His music constitutes a spectrum—really a whole musical ocean [diversity], to paraphrase Beethoven—that is large enough to accommodate all the harmonic theories, theological catechisms and numerological encodings his listeners have found in it over the ages. It is also large enough to accommodate our concerns today, our own peculiar postmodern urges to project upon it differing hermeneutic readings, political allegories, and social or gender hierarchies. That is perhaps Bach's most tenacious theoretical legacy, and one that promises not to exhaust itself anytime soon.⁷²

⁷¹ Thomas Christensen, "Bach among the Theorists," in *Bach Perspectives*, *Volume 3 Creative Responses to Bach from Mozart to Hindemith* (Urbana: University of Illinois Press, 2003), 26.

⁷² Christensen, 45-6.

Bach reception up to the present day, can certainly be characterized as a spectrum when its sheer diversity is considered. In his discussion of Bach reception, Carl Dalhaus characterizes Bach as "'a composer's composer' whose works were held up as paradigms of absolute music."⁷³

Post-tonality and Bach counterpoint

The influence of Bach counterpoint upon modern music can be traced back as early as Wagner.⁷⁴ It is Wagner's artistry which later serves as a model for Schoenberg's Second Viennese School. Incidentally, Wagner's influence on Bebop musicians such as Parker comes via the Wagnerian influenced Richard Straus.

Within the modernist or post-tonal tradition, Stravinsky is very well-known for his Bach inspired works and contrapuntal technique as seen in works such as the *Symphony of Psalms*, the Octet, and his recomposition of Bach's *Canonic Variations*. In his *La reference a Bach dans les oeuvres neo-classiques de Stravinsky*, Angelo Cantoni chronicles Bach references in works from Concerto for Piano and Orchestra to the Sonata for Piano (1924) to the Concerto for Two Pianos.⁷⁵ In "Stravinsky's Break with Contrapuntal Tradition: A Sketch Study," Lynne Rogers uses the term "dissociation" to characterize the composer's contrapuntal technique. Dissociation is defined as "a contrapuntal structure that organizes the texture into highly

⁷³ Ludwig Finscher, "Bach's Posthumous Role in Music History," in *Bach Perspectives, Volume 5 Bach in America* (Urbana: University of Illinois Press, 2003), 110.

⁷⁴ Finscher, 18. Regarding Bach's influence upon Wagner, Ludwig Finscher states: "Wagner's *Tristan* counterpoint had still been firmly rooted in Schumann's adaptation of Bach. His *Meistersinger* counterpoint is differentiated into a highly complex system: counterpoint as craft, parodistic counterpoint, and meditative or affective (emotional) counterpoint. At the same time, one can view this system as an unfolding of the potential embodied in creative Bach reception after Schumann. In its turn, Wagner's *Meistersinger* counterpoint has deeply influenced even those composers who had no direct and intimate dealings with Bach's music—we have only to think of Straus' *Also sprach Zarathustra* or *Sinfonia domestica*."

⁷⁵Angelo Cantoni, *La Reference a Bach dans les oeuvres neo-classiques de Stravinsky* (Hildesheim: George Oms Verlag, 1998), 30.

differentiated and harmonically independent musical layers."⁷⁶ On the other hand, in tonal counterpoint, the melody lines, however distinct, combine to form one harmonic progression which regulates the texture.

Layering of independent lines is a common occurrence in modern counterpoint. This phenomenon occurs in the contrapuntal writings of other composers such as Charles Ives. Within Ives' music, for example, J. Phillip Lambert observes textures of "a wide scale of complexity, from transparent combinations of simple ideas to …dense contrapuntal sound masses…"⁷⁷ It is also worth noting that layering and the increasing independence of melodic lines, as Roger highlights in Stravinsky, has a profound effect on how all of the musical parameters interact with one another. Lambert notes a similar phenomenon in Ives characterized by "a stratification of tonal, metric, or instrumental continuities."⁷⁸

Charles Ives is another fitting representative of the Bachian influence upon the posttonal tradition. His encounters with J.S. Bach began as a boy learning harmony and counterpoint from his father. Once he mastered the "basics," Ives' father encouraged him to make departures from the traditional Bachian style.

"In Varese's music, to mention a well-known instance, counterpoint, in the traditional sense of simultaneously projected lines that form a continuous and unified structure while maintaining at the same time a certain independence, is replaced—to use the composer's terminology—by 'volumes', 'masses' and 'planes.' For example, the sound masses referred to by Varese can be taken as 'seemingly unrelated' (in his words) to exactly the same extent that contrapuntal lines in older music are seemingly independent."

⁷⁶ Lynne Rogers, "Stravinsky's Break with Contrapuntal Tradition: A Sketch Study," *The Journal of Musicology*, Vol. 13, No. 4 (Autumn 1995): 476.

⁷⁷ J. Phillip Lambert, "Ives and Counterpoint,"*American Music*, Vol. 9, No. 2 (Summer 1991): 119-148. Sound masses are also a defining characteristic of Edgard Varese's counterpoint:

Edgard Varese and Chou Wen-chung, "The Liberation of Sound," *Perspectives of New Music*, Vol.5 No.1 (Autumn-Winter 1966): 15.

The progressive layering of contrapuntal lines pervade the twentieth century finding their culmination in the micropolyphony of Gyorgy Ligeti.

⁷⁸ Lambert, 131.

These were often called "sound experiments" including such feats as four key fugues.⁷⁹ Both father and son perceived counterpoint and fugue as experimental mediums. In "Father Knew (and Filled Me Up With) Bach: Bach and Ives—Affinities in Lines and Spaces," Carol Baron states:

According to Ives's values, and those of his father, these kinds of innovative fugal procedures were, at the very least, attempts to strive for relevancy, if only by articulating a step in music's evolution, an evolution inherent in music's nature just as evolution was inherent in all nature.⁸⁰

The idea of music, particularly the music of the masters, evolving is shared by other modern composers such as Arnold Schoenberg, who saw his music as an extension of the masters he revered. Regarding Ives' *First String Quartet*, which later became the *Fourth Symphony*, Lambert states:

In short, Ives's purpose in this fugue was to transcend the confines of contrapuntal laws and compose in a language that has expressivity and character, without completely abandoning the framework of the didactic model.⁸¹

As stated earlier, the techniques of thematic and motivic transformation that are derived from

counterpoint and fugue live on in other stylistic contexts such as the music of the Second

Viennese School.

In Darius Milhaud: Modality and Structure in Music of the 1920s, Deborah Mawer

identifies between Milhaud and Hindemith a common debt to Bach. As an example, she cites

Milhaud's Six Chamber Symphonies (1917-1923) and Hindemith's Kammermusick series

⁷⁹ Carol Baron, "Father Knew (and Filled Me Up With) Bach: Bach and Ives—Affinities in Lines and Spaces," in *Bach Perspectives, Volume 5 Bach in America* (Urbana: University of Illinois Press, 2003), 151.

⁸⁰ Baron, 151.

⁸¹ Lambert, 129.

(1922-27), in which the influence of Bach's *Brandenburg Concertos* prevails over any similarities to Schoenberg's *Kammersymphonie* (No.1) Op. 9 (1906).⁸² Mawer asserts: "Both composers were concerned to revive baroque contrapuntal techniques within their neoclassicism."⁸³ This is evident in both repertoires. Both Milhaud and Hindemith saw composition as craftsmanship.

Hindemith was so closely associated with Bach's baroque craftsmanship that he was often dubbed as the "Bach of the twentieth century."⁸⁴ Stephen Hinton sees Hindemith's reception of Bach as evolving over time. According to Hinton, in the beginning of Hindemith's compositional career, Bach reception and jazz reception went "hand in hand." Regarding the latter part of Hindemith's career, Gunter Ludwig maintains: "The paradigm of Hindemith's mould of musical thinking at the time was to be the *Ludus tonalis*...Hindemith then sets out to investigate a number of complex problems relating to compositional technique. He evolves technical paradigms of polyphonic thinking as articulated by a certain choice of theme."⁸⁵ Here again is the idea that variants of Bach counterpoint can serve as the basis of compositional paradigms. In his analyses of Hindemith, David Neumeyer highlights scale sets, shared pcs among the scale sets, long range harmonic progressions, pillar chords, quartal harmonies, and quintal harmonies.⁸⁶ In "Remarks on Hindemith's Contrapuntal Technique," Hans Tischler points out unconventional chords, an extended technique of common tones, melodic techniques, and polytonalities.⁸⁷

⁸² Deborah Mawer, *Darius Milhaud: Modality and Structure in the Music of the 1920s* (Brookfield, Vermont: Ashgate Publishing Company, 1997), 5.

⁸³ Mawer, 5.

⁸⁴ Stephen Hinton, "Hindemith, Bach, and the Melancholy of Obligation," in *Bach Perspectives, Volume 5 Bach in America* (Urbana: University of Illinois Press, 2003), 133.

⁸⁵ Gunter Ludwig, iii.

⁸⁶ David Neumeyer, *The Music of Paul Hindemith* (New Haven: Yale University Press, 1986), 78.

⁸⁷ Hans Tischler, "Remarks on Hindemith's Contrapuntal Technique," *Journal of the International Folk Music Council*, Vol. 16 (1964), 53.

Bela Bartok, with such works as the Concerto for Orchestra, is also a fitting representative of modernist, neo-Bachian artistry. His contrapuntal philosophy mirrors the experimental, evolutionary, and extra-musical sentiments of his contemporaries. He asserts: "Bach introduced us to the transcendence of counterpoint."⁸⁸ Both Bartok and Villa-Lobos are examples of how modern explorations of Bach counterpoint also incorporates the idioms of folk music. Villa-Lobos, who was a great admirer of Varese and Copland, combines Brazilian popular idioms, such as the tango, with Bach counterpoint in his *Bachianas Brasilieras*. According to Gunther Schuller, our approaches to the music of modernist composers like Bartok and Villa-Lobos can help us to better understand jazz's role in the modernist movement. Just as with Hungarian folk material, jazz, considered part-folklore by composers like Aaron Copland and contemporaneous analysts like Dan G. Hoffman; often finds itself equally at home in both modernist expressions and modernist counterpoints.

Twentieth-Century Counterpoint as Musical Space

The music of the Second Viennese School and ultimately modernism in general, extends the contrapuntal technique of J.S. Bach via the emancipation of dissonance and the subsequent dissolution of tonal structures. This in turn has a transformative effect upon traditional contrapuntal processes and their relationship to other musical parameters. The emancipation of dissonance, the dissolution of tonality, and their effect on contrapuntal technique are integral to an understanding of the post-tonal movement, modernism, and ultimately this proposed paradigm. Marina Lobanova states: "With the emancipation from the constraints of tonality spatial relations supplant temporal ones."⁸⁹ The final result has been

⁸⁸ Roland Nadeau, "Debussy and the Crisis of Tonality," *Music Educators Journal*, Vol. 66, No. 1 (September 1979): 69-73.

⁸⁹ Marina Lobanova, *Gyorgy Ligeti: Style, Ideas, Poetics*, trans. Mark Shuttleworth (Berlin: Verlag Ernst Kuhn, 2002), 60.

coined as unitary musical space, in which there is an equality of the horizontal and vertical dimensions.⁹⁰ Lobanova adds: "The crisis in classical tonality and the resulting 'emancipation of the dissonance' and 'liquidation of tonality' which had been proclaimed by Schoenberg, heralded the first stage in the movement towards the zero form." ⁹¹ Zero form, coined by posttonal composer Gyorgy Ligeti, denotes a "complete neutralization of harmony." ⁹² The clusters once used by Bartok, Milhaud, and Villa-Lobos for only coloristic purposes, here becomes the catalyst for zero form and the spatialization of time, simply by its systematic use. Hence, "the acceptance of clusters" constitutes a shift in the compositional paradigm.⁹³ Lobanova maintains:

His arrival at an understanding of time in terms of space signaled for Ligeti a shift in the musical paradigm itself. According to him: 'So I also see my work as a kind of paradigm shift in the basic realities of musical thought. Previously, music had thought in musical structures and forms (polyphony, melody, harmony, and so forth), while I think in musical structures and forms in which the notion of time is spatially conceived, as if everything was simultaneously present. In the second movement of my *Requiem*, in the Piano Concerto, and in the Cello Concerto there are formations which cannot be adequately described using the conventional concepts of melody, harmony, and rhythm. These works seem to stand before us like objects which simply exist and which will not develop over time in the slightest.⁹⁴

According to Lobanova there are several examples to be found in the post-tonal and dodecaphonic repertoire, including Schoenberg's Opus 16 *Five Pieces for Orchestra*, Bartok's ballet *The Wooden Prince*, and the works of Webern.⁹⁵ Adorno has also observed the spatialization of time or musical space in Debussy and Stravinsky.⁹⁶ This spatialization of time manifests itself as a "stasis", "where forms are perceived 'as revolving on themselves without

- ⁹¹ Lobanova, 54.
- ⁹² Lobanova, 54.
- ⁹³ Lobanova, 54.
- ⁹⁴ Lobanova, 62.
- ⁹⁵ Lobanova, 62.
- ⁹⁶ Lobanova, 60.

⁹⁰ Schoenberg, 248.

actual beginning or end."⁹⁷ The idea of musical space was further developed by modern composers such as Varese who speak of a counterpoint between sound masses.⁹⁸

Musical space and micropolyphony are considered an extension and the next logical

progression in the evolution of both post-tonality and Baroque counterpoint. Gyorgy Ligeti

provides an important piece to the proposed paradigm. In addition to the great contrapuntal

masters of the past such as Ockeghem and Bach, Ligeti also looked to fractal geometry, jazz,

and African rhythm for a better understanding of musical space. Ligeti characterized jazz as

"where 'the European tradition meets the African." Lobanova states:

As always, Ligeti's conception of 'new rhythm' does not simply quote from tradition, it is not the technique itself that the composer draws from so much as the basic notion of 'thinking in hemiolas.' Yet it is by no means fortuitous that Ligeti defines the patterns which he formulates and elaborates in terms of a 'generalized hemiola' as the ideas which he discovered in early music are refracted through the same advances made by serialism...

From African musicians, Ligeti derived the following in addition to background pulsation and form cycles...Crossed rhythm: formulae, motifs, and phrases with the same form number do not need to start or end together, nor to coincide in terms of accent or beat. Extreme manifestations of this entail a rhythmic interlocking, in which individual notes alternately performed by two or three musicians combine to create single, highly complex formulae, resulting in an emergent accentuation. African polyrhythm attracts Ligeti above all as a particular way of thinking, and its principles are only indirectly reflected in his works. The composer is constantly stressing that he writes neither 'folk music' nor 'scientific music.' The distant presence of African rhythm in Ligeti's music is similar to the gamelan allusions in Debussy: in both cases the use of elements of a 'different', non-European culture bears witness not so much to an aesthetic 'exoticism' as to an intellectual paradigm shift.⁹⁹

Carol Lems-Dworkin identifies hemiola as one of the hallmarks of African music. Ligeti's

employment of African polyrhythm in his burgeoning contrapuntal technique provides

additional insight into the connection between quotation or borrowing and compositional

⁹⁷ Lobanova, 60.

⁹⁸ Edgard Varese and Chou Wen-chung, "The Liberation of Sound," *Perspectives of New Music*, Vol.5 No.1 (Autumn-Winter 1966): 15.

⁹⁹ Lobanova, 250.

paradigm shifts. Quotation, borrowing, and recomposition can certainly be catalysts for innovation as well as evolutionary-like progression. This evolutionary view of counterpoint has found its culmination with other Post-World War II composers such as William Bolcom.¹⁰⁰ Bolcom, who studied with Milhaud and juxtaposes ragtime with a contrapuntal invention in his Twelve Etudes, includes style as another emancipated parameter. Regarding his Twelve Etudes, he states:

I now embark on a stylistic and harmonic synthesis no longer involved with any local style—that of a fusion of tonality into non-centered sound (often miscalled "atonal"), as a planet in space draws gravity toward itself. Within this spatial (yet tonal) universe, one can attempt to calibrate one's distance from a strong tonal center with greater accuracy.¹⁰¹

Because the music of the Second Viennese School and ultimately its conception of unitary space found resonance among many a jazz musician including Gershwin, Monk, Brubeck, and others, part of the comparative analyses in this study will involve searching for aspects of this unitary space as proposed by Schoenberg.

Is there counterpoint in Jazz?

Among jazz musicians, the canon of classical music and Bach counterpoint have earned profound respect. Ragtime and jazz musicians had access to both formal and informal classical training, sheet music, recordings, and performances which provided fertile ground for their own

¹⁰⁰ Joshua Berrett, "Review," *American Music*, vol. 7, no.2 (Summer 1989): 234-5. "Bolcom sees tonality as representing 'tension between contraries', evolution and conservatism. It is a tension that 'produces a potential richness of musical energy..enormously fecund and exciting'; his skill in controlling this tension has helped him 'arrive at a musical speech that is at once coherent and comprehensible and in constant expansion." "See also: Robin Holloway, "Ligeti's Half Century," *The Musical Times*, Vol. 145, No. 1889 (Winter 2004): 54-64. "The achieved eventuality came into being with a mighty conscious effort to organize the post-serial flux, and achieve 'correct counterpoint' without ideological madness: rather, the models were Ockeghem, Tallis's 40 part motet, JS Bach's *Singet den Herrn*—glories of medieval, renaissance, baroque vocal polyphony—but absolutely without stylistic/historical referents, let alone pastiche. The grinding application of constructivist mechanisms in an edifice of exhaustive and comprehensive pedantry underpins with flawless accuracy, precision, logic, technical grip, an expressive content of desperate expressionist extremity, igniting unforgettable conflagration."

interpretations. As a result of jazz musicians combining diverse influences with their own

expression, we encounter an early jazz that is known for its highly complex webs of melody

and countermelody.

In Jazz: Its Evolution and Essence, Andre Hodeir ponders whether collective

improvisation could be considered as an authentic counterpoint.

Does this mean that jazz offers examples of purely contrapuntal thought, in the sense referred to when speaking of Machaut or Dufay? Certainly not. The chorus phrase, as we have seen, is essentially harmonic; the melody is not only supported by the harmony, but actually comes from it. The "counterpoint" of jazz might be defined as the superposition of several types of chorus phrase, each conceived in terms of an ensemble in which it plays a well-defined role.

Accordingly, the clarinet, because of its build, its timbre, and its range, cannot change parts with the trombone; and both must bow to the requirements of the part played by the trumpet, their encroaching neighbor, whom they cannot afford to ignore. This technique is derived less from a contrapuntal spirit than from an expanded notion of the countermelody. Equality of voices, as in the fugues of Bach, appears only incidentally in jazz. The different parts undeniably preserve a certain independence as they move along, but that is not enough to qualify musical thought as being essentially contrapuntal. One requirement of such thought is that it should not be determined by any harmonic precedent. In other words, the fact that the chorus phrase must conform to a given bass is incompatible with the freedom required for the flourishing of true counterpoint. That is why the spontaneous polyphony of the New Orleans school, which is completely subjected to the tyranny of chords—and predetermined chords, at that—must be regarded as offering, at best, only incidental examples of counterpoint...¹⁰²

It is curious that Hodeir considers the "tyranny of chords" to be a disqualifying attribute when

considering collective improvisation as a form of polyphony. In fact, Bach was known as the

"harmonist," because of the importance of harmony to his contrapuntal craftsmanship.¹⁰³

¹⁰² Hodeir, 125.

¹⁰³ Christensen, 32.

Moreover, Hodeir's demand for a complete equality of voices overlooks the phenomenon called continuo polyphony."Continuo polyphony" or "concertante counterpoint" is founded on the principle of a functional differentiation between the parts: the counterpoint is hierarchical.¹⁰⁴

Leon Botstein provides additional insights into this phenomenon of collective improvisation:

Players were guided by familiar formal plans, ordered sequences of themes and keys, specific functions of individual instruments within ensembles and common techniques of embellishment. When musicians invented new rhythmic devices and melodic patterns, these were imitated by others and repeated in different pieces, then passed on through oral tradition. The way in which Louis Armstrong once described his approach to soloing—"First I play the melody, then I play the melody 'round the melody, then I routines" (sic)—hints at the conventional practice that shaped his approach to improvising… ¹⁰⁵

This description of the collective improvisation of early jazz does not sound too foreign to the fugue with its formal plans, sequences of keys, melodic patterns/devices, and variation. Moreover, the contrapuntist Milhaud has a perspective of collective improvisation that differs from Hodeir. Milhaud states: "the melodic lines, [were] set off by the percussion, overlapped contrapuntally in a throbbing mixture of broken, twisted rhythms."¹⁰⁶ Hoffman states affirmatively that "…jazz expresses its Negroid-based folk culture in polyphony."¹⁰⁷

African Polyphony in Jazz and Ragtime

Not only has there been debate in the scholarship regarding the presence of polyphony

in jazz, there has also been a lack of consensus as to whether its contrapuntal traits are

 ¹⁰⁴ Carl Dalhaus: 'Counterpoint' in *Grove Music Online. Oxford Music Online*, http://www.oxfordmusiconline.com/article/grove/music/1793 (accessed November 2011)
¹⁰⁵ Leon Botstein. 'Jazz' in *Grove Music Online. Oxford Music Online*,

http://www.oxfordmusiconline.com/article/grove/music/1793 (accessed November 2011) ¹⁰⁶ Mawer, 124.

¹⁰⁷ Hoffman, 120.

European or African in origin. The answers to this question can shed light on whether jazz's inclusion in this unique compositional paradigm is strictly an aesthetic choice or also a result of inherent propensities within the music itself. In the article, "Towards Identification of African Traits in Early Jazz," Mark C. Gridley and Wallace Rave agree that the "rhythmic excitement in jazz" can be attributed to its melodic counterpoint.¹⁰⁸ They maintain that this phenomenon is rooted in a West African drumming tradition in which multiple parts are played by rhythm instruments rather than melodic instruments.¹⁰⁹ Gridley and Rave assert that African harmonic structures are derived from "melodies with similar rhythmic patterns rather than from chord progressions."¹¹⁰ They trace the origins of melodic counterpoint in jazz to the "contrapuntal marching-band" tradition of John Phillip Sousa.¹¹¹ "In the music of the marching band, the European attraction to counterpoint met and blended with the African penchant for improvisation. Thus early jazz developed the tradition for improvised counterpoint."¹¹² Hoffman agrees that jazz's melodic counterpoint has as its basis African polyrhythm rather than African polyphony: "The polyrhythmic nature of Negro music found a freer expression in instrumental polyphony."¹¹³ Hiram Moderwell agrees that the contrapuntal traits of ragtime are rhythmically based as well:

It [ragtime] has carried the complexities of the rhythmic subdivision of the measure to a point never before reached in the history of music. It has established subtle conflicting rhythms to a degree never before attempted in any popular folk-music, and rarely enough in art music...It has gone far beyond most other popular music in the freedom of inner voices (yes, I mean polyphony) and of harmonic modulation.¹¹⁴

¹⁰⁸ Mark C. Gridley and Wallace Rave, "Towards Identification of African Traits in Early Jazz," in *The Black Perspective in Music*, Vol. 12, No. 1 (Spring 1984): 49.

¹⁰⁹ Mark C. Gridley and Wallace Rave, 49.

¹¹⁰ Mark C. Gridley and Wallace Rave, 49.

¹¹¹ Mark C. Gridley and Wallace Rave, 49.

¹¹² Mark C. Gridley and Wallace Rave, 49.

¹¹³ Hoffman, 114.

¹¹⁴ Carol Lems-Dworkin, Africa in Scott Joplin's Music (Evanston, IL: Carol Lems-Dworkin, 1991),14.

Schuller provides the following characterization of African music: "African music, including drumming, is wholly contrapuntal and basically conceived in terms of polymetric and polyrhythmic time relationships... in respect to rhythm African music is unquestionably the world's most complex music..."¹¹⁵

On the other side of the debate, in his 2005 article, Gerard Kubik maintains that there is enough evidence to support of Africa as "one of the planet's cradles of polyphony."¹¹⁶ He cites Bushmen hunter-gatherers such as the Kung who discovered "four different kinds of harmonics – producing techniques on hunting bows."¹¹⁷ Moreover, he asserts that unison and octave styles do not negate the presence of instrumental polyphony:

In Africa, there are large areas in which only singing in unison and octaves is practiced... However, unison and octave styles do not exclude the development of polyphony; the evidence is the instrumental polyphony on xylophones and harps that developed in the precolonial kingdom of Buganda in East Africa's interlacustrine region, a very complex serial music, with no simultaneous sounds other than octaves allowed.¹¹⁸

In *African Polyphony and Polyrhythm: Musical Structure and Methodology*, Simha Arom identifies both polyphonic and non-polyphonic procedures. Among the multi-part non-polyphonic procedures, Arom identifies heterophony, organum, homophony, drone-based music, parallelism, or overlapping.¹¹⁹ Arom defines the instances of polyphony as "multi-part, simultaneous, hetero-rhythmic, and non-parallel," where parts are "considered the constituent elements of a single musical entity."¹²⁰

¹¹⁵ Carol Lems-Dworkin, 17.

¹¹⁶ Gerard Kubik, "The African Matrix in Jazz Harmonic Practices," in *Black Music Research Journal*, Vol. 25, No. ½ (Spring-Fall 2005): 167-222.

¹¹⁷ Kubik, 170-1.

¹¹⁸ Kubik, 170.

 ¹¹⁹ Simha Arom, *African Polyphony and Polyrhythm: Musical Structure and Methodology*, trans. Martin Thom,
Barbara Tuckett and Raymond Boyd (Cambridge: Cambridge University Press, 1991), 34.
¹²⁰ Arom, 34-8.

Recent research verifies that jazz counterpoint has both European and African roots. In addition, Kubik identifies five African principles at work within jazz harmony:

There are five majors principles of organization and conceptualization of tonalharmonic elements in African music that seem to have continued and been creatively applied in jazz. These organizational and cognitional principles include: 1. the span process, 2. the experience of partials-derived systems, 3. blues tonality, 4. the concept of flexible pitch areas, and 5. equihepatonic concepts.

He argues that it is only customary to find the presence of these Africanisms, including African

polyphony, within American jazz. In fact, he states that a contemporaneous movement likened

to New Orleans Jazz occurred in the konkomba music of the Gold Coast. Moreover, he

identifies the transformations undergone by African polyphony during the following jazz eras:

It seems that in jazz history from the 1920s to the 1950s, different sets of African traits became prominent in succession. Heterophony and responsorial, functional polyphony were dominant in early New Orleans jazz, as in the testimony by Bunk Johnson and musicians such as clarinet player George Lewis, who had remained local (that is, not emigrating to the North during the early 1920s); homophonic multipart structures set the tone of big-band jazz during the swing era of the 1930s, while equitonal melodic principles, clustered chords often based on remote partials, and what has been called the *pitch area concept* in the blues staged a breakthrough in bebop of the 1940s.¹²¹

It is worth noting the "clustered chords" of Ligeti's musical space were also having an impact on the Bebop Era.

Jazz and the Baroque Expression

There remains one final question before examining the connection of between

American jazz and Baroque or Bach inspired counterpoint: Do African and African-American counterpoints have any affinities with European Baroque counterpoint? Hoffman asserts that such a connection is evident: "Familiarity with the African idiom shows that its polyrhythm may easily be compared to the polyphony of European music in the baroque period."¹²²

¹²¹ Kubik, 169.

¹²² Hoffman, 112.

Moreover, Hans-Peter Schmitz, an authority on Baroque performance practice identifies several commonalities between the jazz idiom and Baroque music including ornamentation, ostinatos, phrasing, articulation, portamento and glissando techniques. Another affinity not mentioned is the importance of the dance to both idioms. New Orleans jazz initially developed as a dance music which departed from a French dance tradition in Louisiana which included mazurkas and quadrilles.¹²³ On the other hand, as indicated by the writings of Kirnberger, the French dance tradition exerted an influence on the compositional conventions of Bach's time.¹²⁴

Jazz and Bach counterpoint

As stated earlier, while the Jazz Age subsides into the ensuing Swing Era, we continue to hear about musicians such as James P. Johnson who study Bach counterpoint and *Gradus ad Parnassam*. George Gershwin is another example. Gershwin's introduction to counterpoint began as a piano student. His first experiences included studies from the *Well Tempered Clavier* as well as the masterworks of composers such as Liszt, Chopin, and Debussy. Forte asserts that in these early days the "harmonic-contrapuntal" innovations of Liszt, Chopin, and Debussy "must have been absorbed through the fingertips."¹²⁵ Gershwin's formal compositional studies began with Edward Kilenyi during the years of 1919-1921. With Kilenyi, Gershwin studied free composition primarily and Bach style harmonization secondarily. Among his composition notebooks are found two settings of "Ein feste Berg." Later he studied with Henry Cowell. To Cowell's distress, he did not hesitate to pepper his Palestrina-style contrapuntal studies with ninth and altered chords. It was also with Cowell that Gershwin

¹²³ Lawrence Gushee, "The Nineteenth-Century Origins of Jazz," *Black Music Research Journal*, Vol. 22, Supplement: Best of BMRJ (2002): 151-174.

¹²⁴ Meredith Little and Natalie Jenne, *Dance and the Music of J.S. Bach* (Bloomington: Indiana University Press, 2001), 33.

¹²⁵ Allen Forte, *The American Popular Ballad of the Golden Era 1924-1950* (Princeton: Princeton University Press, 1955): 147.

studied the principles of Charles Seeger's dissonant counterpoint. Like other jazz greats such as Eubie Blake, Gershwin also studied the "Schillinger System of Musical Composition," which uses algebraic and geometric operations to regulate counterpoint and the combination of musical parameters. The results of Gershwin's contrapuntal studies can be seen in works such as "Let Em Eat Cake" (1933) which was developed from a contrapuntal exercise. An even greater example is Gershwin's *Porgy and Bess* in which, according to Gershwin, counterpoint was central to his compositional thinking.

I've written most of the music for this show [Porgy and Bess] contrapuntally, and it is that very insistence on the sharpness of a form that gives my music the acid touch it has—which paints the words of the lyrics, and is in keeping with the satire of the piece. At least, I feel it is the counterpoint which helps me do what I am trying to do. I know that it is only contrapuntal writing of the best sort which completely satisfies me in listening to music. I feel that Bach will still live when every one later than Bach has been centuries forgotten— because there is the logic and the wit and the solidity of scientific form in everything he wrote.¹²⁶

Just like Schoenberg and other modern composers, Gershwin cannot mention his use of counterpoint without mentioning the artistry of J.S. Bach. Vernon Duke recalls the following comments made by Gershwin regarding his natural propensity for contrapuntal writing.

Why I once wrote a whole 32 bar chorus in canon and if someone told me it was a canon I'd laugh right in his face. Remember the scale tune?" The scale tune was one of George's lesser songs which was particularly dear to him because you could play the whole E-flat major scale to it in counterpoint six times, and wind up with the lowest notes of the piano at the end of the chorus. "You see, I never knew why I was doing all these things— I thought they were just parlor tricks. They always went great at parties. Now they'll go right into my music!," continued George excitedly. One day he plays the ingenious "Crap Game" fugue from *Porgy*, his face beaming: "Get this—Gershwin writing fugues! What will the boys say now?" ¹²⁷

Not only are there fugues to be found within pivotal scenes from Porgy and Bess, Gilbert

identifies contrapuntal layering as a characteristic of Gershwin's personal style as evidenced by

¹²⁶ Henry Pollack, *Gershwin, His Life and Work* (Berkeley: University of California Press, 2006), 170.

¹²⁷ Duke, 109.

works such as *Rhapsody in Blue, Second Rhapsody,* Concerto in F, and *American in Paris* among others.¹²⁸ Gilbert defines contrapuntal layering as the simultaneous development of independent melodic lines.

In the Bebop Era, there is Theolonious Monk and Bud Powell. They were both exposed to the Bach repertoire and other classical works in their piano lessons as children. Their commentaries exhibit a fondness for both Bach and the modernists. Theolonious Monk's piano works, although not direct homages to Bach, feature complex melodic lines, motives, and compound melodies. Bud Powell recorded "Bud on Bach" which is a rendition of C. P.E. Bach's *Solfeggietto*. This rendition has two parts. The first part is a faithful rendition of *Solfeggietto* at lightning speed. This part transitions into a jazz section which has the traditional head-improvisation-head format. The head or the melody of the jazz section is virtually identical with the beginning of the *Solfeggietto*, excluding the syncopated jazz phrasing and its scoring in both hands. Powell's improvisation is traditional with "comping" in the left hand and solo extemporizations in the right.

As Bebop transitions into the Cool School, we encounter recordings from Julliard trained Miles Davis and his followers such as "Moon Dreams," "Israel," and "Godchild" which are known for their display of contrapuntal technique. Hodeir notes the following regarding these selections:

The voices are not yet really independent, but they are clearly moving in that direction. The writing of the middle voices in "Godchild" and the attempted polyphony of "Israel" are evidences of an effort to achieve some still vague goal, which I would define as a worked out counterpoint in which each voice is conceived as if it were improvised. Such music would require its creators to study a lot and to make a great effort of adaptation; but what possibilities of a kind of jazz based on this principle would have! Miles Davis' beautiful passage in the second part of the central bridge in "Boplicity", which imitates so delicately the ascending melodic figure stated a few bars earlier by

¹²⁸ Steven E. Gilbert, *The Music of Gershwin* (New Haven: Yale University, 1995), 144.

the clear voices of the band, gives a cautious glimpse of what an orchestral language based on this conception might be...

Finally, "Israel" suggests two other observations, one concerning the melody which moves chiefly by scale steps at the sometimes and largely by leaps at others, and the other concerning the orchestral language, which curiously heightens the effect of the lower voices by making them very mobile (particularly in the second and seventh choruses, which are the most polyphonic of all).¹²⁹

The above commentary is related to Hodeir's previous argument refuting the idea of an authentic counterpoint in jazz. As stated earlier, independence or the lack thereof among voices can be relative, especially in the light of continuo polyphony. Even four part chorales have contrapuntal interest. In fact, according to Kirnberger, the four part chorales serve as the background to Bach's contrapuntal works.¹³⁰

In the years of experimentation that follows the Cool School, the Bach homages of John Lewis and the Modern Jazz Quartet make their appearance. In 1973, they released the album *Blues on Bach*. Included is a set of "Baroque Blues," one of which is entitled "Blues in H (B)." These songs combine counterpoint with jazz syncopation. "Tears from the Children" is a faithful rendition of the Bach Prelude no. 8 in E-flat minor, played by the vibraphone, harpsichord and bass. The timbres of the vibraphone and bass alone without any improvisation communicates the sense of a jazz versus baroque duality. John Lewis later records his own rendition of the *Well-Tempered Clavier*. Many of the preludes are interrupted at the midpoint by a spontaneous jazz improvisation built on Bach's original motives and harmonic progressions. For example, in Lewis' adaptation of the Prelude No. 13 in F-sharp minor, BWV 858, there is a bluesy ostinato and a seeming quotation from Gershwin's *Summertime*.

Numbered among the late twentieth-century jazz musicians who are admirers of J.S. Bach is Dave Brubeck. Brubeck names Bach as his greatest overall influence. His secondary

¹²⁹ Hodeir, 25.

¹³⁰ Christensen, 32.

influences include Stravinsky, Bartok, and Milhaud-each is an admirer of Bach counterpoint as well. Brubeck studied with Milhaud. He also took two composition lessons with Schoenberg. An article in the 1956 *Current Biography Yearbook* states regarding Brubeck's personal style: "Brubeck injects [into his jazz improvisations] classical counterpoint, atonal harmonies and modern dissonances which hint at composers like Debussy, Stravinsky, Bartok, and Bach."¹³¹ Moreover, Brubeck had been known to indulge in contrapuntal exchanges with his saxophone player—giving his group their distinctive sound. One of the more ambitious recordings of the Dave Brubeck Octet includes a "Fugue on Bop Themes." Brubeck's output includes works with Bach quotations such as "Fare Thee Well Annabelle" (1954), which quotes "Jesu Joy of Man's Desiring," and "Because All Men Are Brothers," which quotes a Bach chorale. In the last half of his career, Brubeck has focused most of his attention on composing jazz inspired "serious music." There are several works in the Brubeck repertoire that are known for their intersections of post-tonality, jazz, and Bach inspired counterpoint, including: Summit Sessions (St. Matthew Passion), Chromatic Fantasy Sonata (Chromatic Fantasy and Fugue), and Brandenburg Gate (Brandenburg Concertos). Here Brubeck is following in the footsteps of his teacher Milhaud who also composed his own homage to the Brandenburg Concertos.

Jacques Loussier is also known for his own adaptations of Bach works. Loussier maintains that Bach counterpoint lends itself to jazz more easily than other baroque expressions such as Vivaldian counterpoint.

When I do an arrangement, I look at the music and try to decide which part will still be played in classical style, where I can open it up to jazz improvisation, and where I'll introduce some freer sections for myself or the bassist. Vivaldi's music is very different from Bach's in terms of its structure. There is jazz already present in Bach, in the

¹³¹ Stephen A. Crist, "The Role and Meaning of the Bach Chorale in the Music of Dave Brubeck," in *Bach Perspectives, Volume 5 Bach in America* (Urbana: University of Illinois Press, 2003), 179.

number of measures, his harmonies, and so on, but Vivaldi may stay on one chord for many measures, and he may choose not to develop a harmonic idea.¹³²

Loussier's comments indicate the aspects of Bach that makes him attractive to jazz musicians: form, harmonic rhythm, harmonic variety, and motivic development. Loussier's most notable recordings of Bach include adaptations of the Toccata and Fugue in D minor, Invention in C major, and *The Goldberg Variations*.

Conclusions Regarding This Neglected Paradigm

A mutual borrowing of idioms between post-tonal music and jazz combined with a shared concern for music of the past, in the form of counterpoint, resulting in the emergence of a "compositional unity" or paradigm which engages the three styles. The emergence of this compositional paradigm constituted a paradigm shift or revolution that impacted both musics. On one hand, the influence of jazz upon post-tonal music often occurred via ragtime. On the other hand, the post-tonal influence upon jazz manifested in the form of symphonic jazz and a variety of allusions. The emergence of this compositional paradigm can be attributed to several factors. There were numerous personal interactions between post-tonal and jazz composers. There was not a shortage of opportunities to study other musics as well as the music of the past. There was also a shared modernist impulse between the two musics that was observed by both European and American culture.

The distinguishing characteristic of the modernist impulse was an engagement with the past. Such an engagement often involved counterpoint in general and Bach style counterpoint in particular. This resulted in numerous Bach recompositions, homages, and other allusions to contrapuntal technique among both post-tonal and jazz musicians. The engagement of

¹³² Alyn Shipton, *Handful of Keys: Conversations with Thirty Jazz Pianists* (New York: Equinox Publishing, 2004), 102.

counterpoint by both "post-tonal" and "jazz" composers, such as Ives, Milhaud, and Gershwin, resulted in an increasing complexity of textures which culminated in the onset of a unitary musical space or zero form. The markers of unitary space include complex layering, the use of clusters, the equality of the horizontal and vertical dimension, and voices moving in close proximity, anticipating micropolyphony. Although controversial among scholars, the affinity for counterpoint among jazz musicians can be attributed to a heritage of African polyphony. Jazz's affinity for counterpoint manifested early in its history ranging from the "call and response" technique to collective improvisation of the Jazz Age.

Early and Baroque music's aesthetic for innovation, motivic development, and counterpoint emitted an undeniable allure for twentieth century musicians bringing them together from disparate styles as well as solidifying an often overlooked compositional paradigm. Just as the post-tonal music and jazz were forever changed by borrowing and experimentation (in spite of claims of authenticity from both sides),¹³³ our choices of analytical tools and schematas for listening to and studying this body of music should be forever changed. The concept of Third Stream was controversial both among most post-tonal and jazz musicians who grappled with maintaining authenticity in spite of their borrowings. It is for this reason that Schuller insisted that Third Stream was an independent entity from classical and jazz music.

¹³³ Schuller in response to his critics: "In other words, how important is the ragginess of Stravinsky's *Ragtime* or jazziness of his *Ebony Concerto*? It is the same question that folklorists might have asked Mozart regarding the authenticity of the minuets in his symphonies, or of Bach's sarabandes in his suites.

[&]quot;Though we tend nowadays to accept the integrity and unity of Bartok's use of Hungarian and Romanian folk material, I can well imagine that fifty years ago aficionados of Hungarian folk and dance music could relate more precisely to Bartok's simpler folk-influenced works than they could say, to his complex, harshly dissonant *Miraculous Mandarin* ballet music. Conversely, I can also imagine that in those early days certain Balkan ethnomusicological purists must have resented the intrusion of atonal and modern harmonics into the private domain of their folkloric territory. The question arises time and time again when we confront jazz-influenced classical works (as well as those on the jazz side that borrowed elements from the classical field)." Gunther Schuller, "The Influence of Jazz on the History and Development of Concert Music," in *New Perspectives on Jazz*, ed., David N. Baker (London: Smithsonian Press, 1990), 16.

like research programs. The tensions between "authentic" styles and music that blends classical and jazz idioms mirrors the tensions that exist between Newtonian and Einsteinian theory. Ultimately in Western music history, the objections of purists on both sides resulted in the stagnation of the Third Stream concept and the subsequent neglect of the proposed compositional paradigm in current literature. The acknowledgement of this body of music as a distinct compositional paradigm brings musical borrowing to the forefront, as it should. Borrowing is a defining characteristic of this compositional paradigm. Recognition of this characteristic should be at the core of any analysis of this music.

CHAPTER 2

RULES OF ENGAGEMENT: FOUNDATIONS FOR ANALYSIS

A paradigm based on post-tonality, jazz, and counterpoint engages the following: a study of musical borrowing, applications of the philosophy of science, and the analysis of an evolving counterpoint which culminates into musical space. Musical borrowing and counterpoint have been closely allied throughout Western music history. So much so that borrowing was a defining feature of the motet. In the twentieth century, as a revolution of musical discourse takes shape via the vehicles of musical borrowing and an evolving contrapuntal technique, theories from the philosophy of science offer a framework for analysis.

According to J. Peter Burkholder, the study of musical borrowing is a new frontier which welcomes opportunities for development. ¹ The concept of musical borrowing itself has been borrowed from other artistic disciplines, namely literary criticism. With this type of inquiry being interdisciplinary by nature, it comes as no surprise that it also engages the philosophy of science.² (The circumstances and benefits of such an engagement with philosophy of science will be discussed to later in this chapter.) There are terms that are associated with this type of inquiry including: borrowing, allusion, intertextuality, and influence. Each of these terms also have their origins in literary criticism. Although the usage of these once exclusively literary terms can be problematic, they do provide insight into the

¹ In J. Peter Burkholder's article, "The Uses of Existing Music: Musical Borrowing as a Field," the term musical borrowing is used to describe musical works that reference other musical works.

J. Peter Burkholder, "The Uses of Existing Music: Musical Borrowing as a Field," *Journal of the American Musicological Society*, Vol. 54, No. 2 (Summer 2001): 851-870.

² This engagement with philosophy of science has also been acknowledged by Burkholder. Burkholder, 856.

concept of musical borrowing. The following discussion provides an overview of how the terms of allusion, intertextuality, borrowing, and influence are applied in the field of music.

A musical allusion is "a reference in a musical work to another musical work or to a style or convention, in a manner akin to an allusion in speech or literature or the act of making such a reference."³ Two musical works can bear similarities in gestures, melodic or rhythmic contours, timbres, textures, or form. Not all allusions are considered quotations. However, quotation is considered a type of allusion. Allusions not only reference musical works but also styles and conventions. Hence, stylistic allusions can occur in the absence of "actual borrowing."⁴ Allusions, in whatever form or scale they manifest, in turn "convey meaning."⁵

Reynolds and Agawu's theories of allusion

In Motives for Allusion: Context and Context in Nineteenth Century Music,

Christopher Reynolds sheds light on the circumstances of musical allusion.

At one end of the spectrum are two pieces by composers who did not know each other's works; at the other, two compositions written by siblings with a letter documenting the musical debt. Most instances of musical allusion inevitably fall in between, involving works written by composers aware of one another but without written corroboration. In the absence of documentary evidence, arguments for plausibility depend not just on circumstantial evidence linking two composers or two works; they also require a theoretical basis to explain how public statements attesting to creative originality are to be reconciled with private musical debts.⁶

Included in Reynolds' spectrum of allusion, are connections which are perceived in the absence of historical connections and evidence. Earlier, Reynolds recalls hearing as a boy a connection between a Buxtehude organ work and Beethoven's Fifth Symphony. Even though such a

³ J. Peter Burkholder: "Allusion", in Grove Music Online. Oxford Music Online,

http://www.oxfordonline.com/oxford/grove/yallusion (accessed January 2013). ⁴ Burkholder, 855.

⁵ J. Peter Burkholder: "Allusion", in Grove Music Online. Oxford Music Online,

http://www.oxfordonline.com/oxford/grove/intertextuality (accessed January 2013).

⁶ Christopher Alan Reynolds, *Motives for Allusion: Context and Context in Nineteenth Century Music* (Harvard University Press: Cambridge, 2003), xi.

connection is historically impossible, the connection was real to him at the time as a listener. Moreover, this early listening experience although seemingly naive did serve as an introduction to Reynolds' informed experiences with musical allusion in the nineteenth century and other style periods. This example illustrates how references and interconnections are often in the ear of the beholder – whether a borrowing or reference is conscious, subconscious, or imagined. References, influences, or interconnections between composers and styles can be perceived by the listener whether there is historical evidence that supports it or not. Moreover, the personal experiences (or schema) of the listener do interact with a piece of music to evoke associations with other compositions and styles even in the absence of historical evidence or feasibility. On the other hand, moving from Reynolds' experience as a young listener back to the Buxtehude organ work itself, it should be considered that affinities do exist between composers who are separated by historical, cultural, and geographic divides. Although Reynolds' theory does not address what can be called anomalies of perception due to a lack of historical evidence, Reynolds curiously does include these compositions in his spectrum of allusion. Reynolds' example raises a need that should be addressed in both his system and much of the current literature on borrowing and allusion: How does allusion serve the aims of the listener? Often allusions and references in musical works are indeed the product of the composers' own experiences as listeners and analysts.

Reynolds' analytical system provides analysts with the following questions that need to be addressed: "While question of audibility must of course be raised, it needs to be posed in a way that allows for consideration of (1) the musical context of the allusion (what does the text or context of the earlier work contribute to the later work?; (2) the biographical context (did the later composer express his or her thoughts about the earlier work?); (3) the audience (to whom is the allusion addressed?); and (4) the conventions of allusion (did the composer 'frame' the allusion? Is the motive one that many composers incorporated – that is, is it part of an allusive tradition?)."⁷ Most twentieth-century borrowings in post-tonal and jazz musics do have biographical contexts and a target audience. The compositional paradigm formed by the intersections of post-tonality, jazz, and counterpoint can be characterized as an allusive tradition, as will be seen throughout the course of this study.

Christopher Reynolds also cites Kofi Agawu's theory regarding the expressive

vocabulary of musical topics inherent in motives for allusion:

Many of these examples belong to the 'expressive vocabulary' of musical topics, a world – Kofi Agawu has called it a 'universe' – of musical types and styles that eighteenth- and nineteenth-century composers shared with their audiences. A very short list of topics includes dances (such as the sarabande and minuet), fanfares, hunting calls, learned styles, national styles, pastoral ideals, meteorological effects, and Turkish music. By means of characteristic rhythms, melodic patterns, and instrumentation, a composer could resort to any of these signs, confident that listeners would comprehend the non-musical associations. Topics relied on cultural conventions and mimesis to establish the expressive meaning of a sign. While some topics (march, fanfare) survived into the twentieth century, others such as the minuet and Turkish music vanished when the social context that gave rise to the convention disappeared.⁸

Agawu's theory demonstrates that individual motives of allusion combine to form an "expressive vocabulary of musical topics." Included among these musical topics or signs are musical types and styles. Additionally, Agawu goes a step further than Reynolds regarding the exchange between the composer and the listener. Non-musical associations and cultural conventions combine with musical signs forming a language. The cultural conventions that Agawu speaks of can account for anomalies of listening. As conventions change, the present-day listener could miss signs or references intended by the composer. Also, the opposite can be true with the listener bringing a different set of cultural experiences to the musical work;

⁷ Reynolds, 2.

⁸ Reynolds, 9.
consciously or subconsciously interjecting references unknown to the composer. Reynolds' referencing Agawu's theory demonstrates how closely related the allusion and semiotics are to one another. Allusion necessitates the presence of an existing work. Semiotics may or may not reference existing works. Rather, cultural influences and meaning are always present coloring the listener's experience.

Another related literary term, intertextuality, is used with the most success in current studies of motets. In J. Michael Allsen's "Intertextuality and Compositional Process in Two Cantilena Motets by Hugo de Latins," a footnote elucidates the usefulness of the term intertextuality for that genre:

The term 'intertextuality' as used here, denotes all forms of material---melodic, contrapuntal, structural and textual---shared by musical works. Although this term has long been used in literary criticism, it has only recently been introduced into the musicological vocabulary....As noted by Crook, the concept is valuable in its broad and non-specific nature: it allows us to analyze relationships between pairs of works or entire complexes of works without the terminological difficult inherent in words such as 'parody,' 'imitation' (*imitatio*) or even 'borrowing.'⁹

Intertextuality is a broader term which permits a discussion of shared styles, conventions, and language.¹⁰ Borrowing, on the other hand, is more specific and narrow in scope. Additionally, borrowing is a phenomenon that is one directional whereas intertextuality highlights mutual influence. The term intertextuality also lends itself to the formation of "networks" or

"complexes" of related works:

Theories of intertextuality consider a work as a 'text', in other words as semiotic system, whose meaning emerges from its location within a network of potentially infinite other texts. In Kristeva's words 'any text is constructed as a mosaic of quotations; any text is the absorption and transformation of another....The cross-referential nature of medieval poetic texts has recently prompted the intertextual

⁹ J. Michael Allsen, "Intertextuality and Compositional Process in Two Cantilena Motets by Hugo de Latins," *The Journal of Musicology*, Vol. 11 No. 2 (Spring 1993): 172-202.

¹⁰ J. Peter Burkholder: "Intertextuality," in *Grove Music Online*. *Oxford Music Online*, http://www.oxfordonline.com/oxford/grove/intertextuality (accessed January 2013).

investigation of chansons from the 14th and early 15th centuries. Closer examination of this repertory has revealed families of chansons connected not only through shared texts and musical allusions but also via related rhetorical *topoi* that prompted musical intertextual relationships even in the absence of explicit textual references in their respective verses. For example, Paula Higgins and David Fallows have pointed out the network of musical connections that characterize an ever-expanding group of chansons related to Dufay's *Le seviteur hault guerdonne*.¹¹

These networks or families of musical works to which Koutsobina refers are essentially compositional paradigms synthesized from a convention of borrowing. The twentieth century paradigm proposed in this study is formed by a similar network of borrowings. For that reason, this study posits that intertextuality is an applicable term for this compositional paradigm which engages post-tonality, jazz, and counterpoint. However, J. Peter Burkholder does not support the application of intertextuality to other musics outside of the Medieval and Renaissance periods. Firstly, he asserts that the broadness of the term is too problematic. Undoubtedly, its inclusion of "all of the ways one piece of music is like another, including general similarities of aesthetic, style, and procedure" may pose as a challenge to substantiating concrete connections between specific works.¹² However, as will be seen below, stylistic allusion and the imitation of procedures are still included in his account of the uses of existing music. Moreover, revisions of style and generalized procedure do play an important role in the music of the proposed paradigm. Secondly, Burkholder feels the applications of intertextuality do not answer the question of derivation. To Burkholder, the origin of the idea and the chronology of its development is important. On the other hand, however, the term "borrowing" assumes that the influence flows in one direction and does not permit mutuality. Mutuality exists in this proposed paradigm alongside clear indications of derivation. Moreover, borrowing is often

¹¹ Vassiliki Koutsobina, "Readings of poetry---readings of music: intertextuality in Josquin's *Je me complains de mon amy*," *Early Music*, Vol. XXXVI, No. 1 (2008): 67-78.

¹² Burkholder, 862.

limited to comparing two works whereas intertextuality permits the assemblage of networks of related works or a compositional paradigm.

Burkholder's theory of musical borrowing

In "The Uses of Existing Music: Musical Borrowing as a Field", J. Peter Burkholder establishes the vitality of this potential field of study, the guidelines for inquiry, and the necessary delimitations. Firstly, he encourages analysts not to make "hasty" decisions regarding musical borrowing. Burkholder cites those Ives scholars who make snap judgments regarding uses of existing music without knowing fully its structural depth nor other instances in which it appears in Ives's earlier compositions. Secondly, Burkholder demonstrates how the knowledge of musical borrowing by other composers, in other genres as well as other eras and traditions; can enhance any such inquiry. His own experiences with Renaissance music provided him with a unique perspective on the nature of musical borrowing itself. Thirdly, Burkholder also provides a list of questions to consider when analyzing an instance of musical borrowing: "(1) What is the relationship of the existing piece to the new piece that borrows from it? (2)What element or elements of the existing piece are incorporated into or referred to by the new piece, in whole or part? (3) How does the borrowed material relate to the shape of the new piece? (4) How is the borrowed material altered in the new piece? (5) What is the function of the borrowed material within the new piece?"¹³ His argument for the term "musical borrowing" versus "intertextuality" is encapsulated in the following statement: "But it [the borrowing] must be sufficiently individual to be identifiable as coming from this particular

¹³ J. Peter Burkholder: "Borrowing," in *Grove Music Online. Oxford Music Online,* http://www.oxfordonline.com/oxford/grove/borrowing (accessed January 2013).

work, rather than from a repertoire in general."¹⁴ In other words, the more a musical borrowing establishes the individuality of the work, the better.

According to Burkholder, musical borrowing can be anything from a melody to a structural plan. Musical borrowing can be expanded to include all the parameters, such as texture. Based on his studies of early music and the works of Charles Ives, Burkholder assembles a "taxonomy" of functions for musical borrowing, including: modeling, variations, paraphrasing, arranging, setting, cantus firmus, medley, quodlibet, stylistic allusion, cumulative setting, programmatic quotation, collage, patchwork, and extended paraphrase.¹⁵ Modeling and stylistic allusion are the most prevalent in the proposed compositional paradigm which engages post-tonality, jazz, and counterpoint. The fact that Burkholder derives his typology or "taxonomy" of borrowing from early music, as well as, the works of Charles Ives is very telling. It demonstrates that musical borrowing is integrally linked to the processes of developing variation, improvisation, and counterpoint – each playing major roles in the music of the twentieth century.

In a 2011 keynote address for the College Music Society conference at Rhodes College, J. Peter Burkholder discussed style as an additional type of musical borrowing.¹⁶ Stylistic heterogeneity which has sustained its presence throughout Western music history – from masses to motets to madrigals to Mozart – is closely related to the phenomenon of musical borrowing. Contrasting styles can be used in a given musical work for expressive purposes as well as serve structural functions. These contrasting styles, which are often textural in character, create a sense of tension and release – providing its own sense of progression.

¹⁴ Burkholder, 863.

¹⁵ Burkholder, 854. Burkholder asserts that the assemblage of a taxonomy was crucial to his understanding of musical borrowing and how it evolves over time. A more indepth discussion will follow shortly.

¹⁶ J. Peter Burkholder, "Style Contrast as a Formal and Expressive Device in Early Music" (paper presented at the annual meeting of the Southern Chapter of the College Music Society, Memphis, TN, February 25, 2011).

Stylistic transformation can manifest as juxtaposition, parsimony, and even instances of stylistic ambiguity. Burkholder cites DuFay's *Supremum est mortalibus bonum*, measures 101-120, in which counterpoint over a cantus firmus is contrasted with chordal declamation in long notes, fauxbourdon style, and free counterpoint.¹⁷ Within the proposed compositional paradigm, as styles begin to coexist on equal footing in individual works, stylistic allusion transitions to stylistic heterogeneity.

Burkholder's methodology does acknowledge the existence certain anomalies of perception related to recognition and intent. He maintains:

...it is the composer or improviser who creates these relationships and the listener who recognizes them. It is possible, even frequent, for composers to borrow material that listeners may not recognize and for listeners to hear similarities composers did not intend. Much of the relationship on borrowing directly engages these issues of recognition and intent, identifying hitherto unsuspected relationships and presenting evidence to support the claim that borrowing has occurred, beyond subjective impressions.¹⁸

Here, it must be noted that Burkholder expands the art of borrowing to include improvisers as well as composers. This makes it possible for an application of this theory to jazz compositions, which will be discussed shortly. In addition, Burkholder acknowledges the existence of unrecognizable borrowings due to the following: "a thorough reworking," "disguised borrowings or subtle allusion" or compositions that blur the line between an arrangement and a new work.¹⁹ Unintended similarities and "unsuspected relationships" between composers are also highlighted. He is quick to add, however, that all claims must be supported beyond subjective impressions. According to Burkholder, "biographical evidence" is required to support all claims:

¹⁷ Ibid.

 ¹⁸ J. Peter Burkholder: "Borrowing," in *Grove Music Online. Oxford Music Online*, http://www.oxfordonline.com/oxford/grove/borrowing (accessed January 2013).
¹⁹ Ibid.

The case for borrowing is stronger when it can be proved that the composer knew or had access to the existing pieces. This requires biographical evidence that will vary with the relationship of the new piece to the existing one, from establishing chronology within the composer's own works to showing contact with other musicians or knowledge of music the composer studied, performed, or heard.²⁰

The proposed paradigm is substantiated by mutual access between stylistic counterparts as well as music of the past. However, Burkholder's theory, although accounting for anomalies of perception, does not account for instances when composers challenge listeners to rehear things in unconventional ways. For example, Straus asserts regarding the Violin Concerto that Berg seemingly invites listeners to hear the Bach chorale as a product of his own twelve-tone row. Of course, Berg was never capable of going back in time and changing history. Moreover, Berg is surely the borrower. However, if the listener so chooses, his interpretation of the Bach chorale in question can be colored by its subsequent incorporation into Berg's twelve tone row. The basis of this interpretation is predicated upon the evidence that Berg provides – its artful treatment in the Violin Concerto. This anomaly of perception is not substantiated historically nor addressed by Burkholder's analytical framework.

In addition to "biographical evidence," Burkholder maintains that the proof of a borrowing is further substantiated by an explicit function within the work. Burkholder asserts: "Proof of borrowing is incomplete until a purpose can be demonstrated. If no function for the borrowed material can be established, its use remains a mystery and the resemblance may be coincidental. Reliance on the borrowed material as a theme, structural element or point of prominence makes its function clear."²¹ Again, Burkholder seeks to differentiate borrowing from mere coincidence. Establishing a function adds credibility to the connection. However, establishing a function for the borrowing in the work also begs the question of composer intent.

²⁰ Ibid.

²¹ Ibid.

Establishing composer intent can be problematic in the absence of biographical evidence.

Moreover, as Burkholder stated earlier, relationships can be present that are not what the

composer intended. Again, it comes back to conviction of the listener or analyst who perceives

a borrowing and interprets its meaning.

Ingrid Monson asserts that what Burkholder calls musical borrowing is also a defining feature of the African-American musical tradition. Within the African-American tradition in general and jazz in particular, musical borrowing results in transformation:

Transformation of existing genres is also a well-known feature of African American musical expression. The transformation of Isaac Watts hymns into African-American Christian songs, of march forms into ragtime, and of musical theater tunes into jazz standards have all been important signs of African American creativity and originality. Indeed, synthesis and transformation of musical elements from both African and European origins have long been noted in scholarly discussions of jazz history. It is this transformative quality of jazz improvisation that Gates has in mind when he comments that 'there are so many examples of signifyin(g) in jazz that one could write a formal history of its development on the basis alone.'²²

The transformation of existing genres occurs through a process that is similar to what Burkholder calls modeling. Existing works and ultimately existing genres were transformed by "rag-ing" the original material.²³ This "rag-ing" technique mirrors the inversion of "mainstream literary and linguistic conventions" in the cultural practice of "signifyin(g)." ²⁴ Regarding "signifyin(g)," Monson states: "Signifyin(g) is black double-voicedness; because it always entails formal revision and an intertextual relation... I find it an ideal metaphor for black literary criticism, or the formal manner in which texts seem concerned to address their

²² Ingrid Monson, *Saying Something: Jazz improvisation and Interaction* (Chicago: University of Chicago Press, 1996), 104.

²³ "Ragtime is not a type of song; it is a type of song treatment; in fact it is the distinctive American treatment of a song in general... 'Ragtime' pervades all styles and classes of American music, from the coon song to the parlor love song..."

Karl Koenig, ed. Jazz in Print (1856-1929): An Anthology of Selected Early Readings in Jazz History (New York: Pendragon Press, 2002), 87.

²⁴ The placing of parenthesis around the "g" is Monson's emphasis, indicating the vernacular usage.

antecedents. Repetition with a signal difference, is fundamental to the nature of Signifyin(g)...²⁵

Signifyin(g) represents the synthesis of African and European elements. Signifyin(g) goes a step beyond borrowing to engage intertextuality and revisionism. The phrase, "repetition with a signal difference," indicates a reference and its alteration that is recognizable at once to the listener. Moreover, this "repetition with a signal difference" is also closely allied with musical irony and parody. Literary theorist Henry Louis Gates elucidates the role of parody within the African-American tradition:

Parody, then, in its ironic 'trans-contextualization' and inversion, is repetition with a difference. A critical distance is implied between the backgrounded text being parodied and the new incorporating work, a distance usually signaled by irony. But this irony can be playful as well as belittling; it can be critically constructive as well as destructive.²⁶

The attraction between the post-tonal movement and African-American tradition, largely ragtime and jazz, can be attributed to the shared aesthetic of borrowing but also for the aesthetic for variation, repetition, and inversion being active in both musics. According to Monson, the tradition of musical irony and parody continues in jazz in the following forms: "musical irony conveyed by the transformation of a European American popular song into a vehicle for jazz improvisation;" a "reference to a particular classical composer in ironic style;" and a" humorous allusion to styles within the mainstream jazz tradition."²⁷ Musical parodies and ironies in jazz can be traced to the earliest African-American performances such the cakewalk and later ragtime, which were satirical representations of white culture. As the mutual borrowing unfolds between both the classical and jazz tradition, the complexity of the irony

²⁵ Monson, 103.

²⁶ John P. Murphy, "The Joy of Influence," *The Black Perspective in Music, Vol. 18, No. 1/2*: 8.

²⁷ Monson, 106.

increases. Imamu Amiri Baraka observes this complexity in the work of white minstrelsy, whose borrowings become "satire[s] of a satire."²⁸ Parodies and the subsequent "satire[s] of satires" are certainly present in the proposed paradigm as represented by Debussy's "Golliwog Cakewalk."

Erin Gabbard points out that in the Bebop tradition, references and quotations serve numerous functions that go beyond parody and irony, including: references as tributes to original songs or composers; references as tributes to other quoters; references as "respite from creating new phrases;" and references as jokes among "hipsters."²⁹ She states that beboppers in the 1940s and avantegardiste art shared an impulse to blur the distinctions between high and low art:

In the hands of beboppers, the practice [of borrowing] became what I call an 'avantgarde gesture,' not unlike disruptions of classical art in the European vanguard movements of the early twentieth century. Like their predecessors in this 'historical avantgarde,' boppers used quotation to undermine distinctions between high and low art and to question the 'aura' that in the minds of most listeners surrounds the work of composers like Percy Grainger but not the improvisations of a black saxophone player. In addition, the quoting bop artist creates the effect of a collage, something that Peter Burger has called a 'fundamental principle of avantegardiste art.' Although the term 'avantegarde jazz' has most commonly been associated with the 'free' music of Ornette Coleman, Cecil Taylor, and their followers in the 1960s, I would suggest that bebop and free jazz share an avante-garde character, especially when they employ quotation and other collage effects.³⁰

Quotation and collage effects are both listed under Burkholder's typology. Moreover, within the jazz tradition, quotation and collage effects are not relegated to the Bebop movement. In fact, the entirety of the ragtime and jazz movements can be considered avantgardiste movements under Gabbard and Burger's definition. Although she does not

²⁸ Monson, 105.

²⁹ Erin Gabbard, "The Quoter and His Culture," in *Jazz in Mind: Essays on the History and Meanings of Jazz*, eds. Reginald T. Buckner and Steven Weiland (Detroit: Wayne State University), 1991.

³⁰ Gabbard, 93.

acknowledge this fact, Gabbard does go on to point out the quotations to be found in Louis Armstrong's performances from the 1920s. Gabbard maintains, however, that bop quotations were "less complicated by conflicting messages." ³¹ According to Gabbard, this is attributed to the fact that bebop musicians began to perceive themselves more as artists rather than entertainers. The characterization of jazz as low art was certainly problematic for jazz musicians. Gabbard makes this observation regarding Charlie Parker:

While club audiences might have appreciated his ironic allusions to Grainger, Grieg, Rossini, or Bizet, Parker seems to have been quite sincere in his efforts to expand his audience (and his own resources as a musician) by performing with a lachrymose string orchestra. There is also no doubt that he genuinely admired Honneger, Stravinsky, Hindemith, and Varese, but these are not the composers that he felt obliged to quote.³²

Here, Gabbard sheds light on how a multiplicity of influences translates into a

multiplicity of references at the bop musician's disposal. Some allusions better served the bop

musicians sociopolitical ends than others. Beyond the 1940s, the desire for jazz to be taken

seriously as art music in its own right continued to intensify as also observed in the biography

of Charles Mingus.³³

The commentary of Monson and Gabbard demonstrates the complexities in applying

Burkholder's functions of existing music to jazz. Although there are marked differences in

³¹ Gabbard, 93.

³² Gabbard, 104.

³³ "During these years, Mingus articulated a shifting aesthetic philosophy that was a product of a continual struggle to reconcile his music, his identity, and his position in the society in which he lived. He was keenly aware of how racism and economic exploitation operated in the music industry....Even as he celebrated jazz as a distinct art form, Mingus tried to dismantle the boundaries between jazz and classical music. This erasure of generic boundary not only affirmed musical projects (like his own) that incorporated elements from both fields but also sought to give jazz a cultural legitimacy equal to that of classical music---an act of aesthetic leveling.... In Mingus' view, jazz was a site of black accomplishment, but it was also a term to be rejected because of its association with the limitations imposed by race. Writing during the decline of bebop's popularity, Mingus saw how some musicians were caught between an audience for classical music, which disdained jazz as a popular expression, and a popular audience, which preferred the exuberance of jump and rhythm and blues over the cerebral textures of modern jazz...."

Eric Porter, *What is this thing called Jazz?: African-American Musicians as Artists, Critics, and Activists* (Berkeley: University of California Press, 2002), 102-3.

the sociopolitical circumstances and motivations of jazz and classical musicians, these functions do find an application to jazz as well as this proposed paradigm in which jazz engages with what was perceived as high art.

Straus' Remaking the Past: Influence as Anxiety

The thesis for *Remaking the Past* is encapsulated in this statement: "Composers in the first part of the twentieth century, despite their superficial dissimilarities, share musical techniques for remaking earlier forms, style elements, sonorities, and musical works..."³⁴ Although he acknowledges the practice of musical borrowing in earlier time periods, Straus asserts that "the relationship between a music and its predecessors became a matter of particular urgency in the early twentieth century."³⁵ In spite of their individual labels as either neoclassicist or progressive, there was a "common preoccupation" with the musical past shared by five composers: Bartok, Stravinsky, Schoenberg, Berg, and Webern.³⁶ This is due to the simultaneous emergence of both a central canon and a musical mass culture since the 1800s. For the first time in history, unlike Bach and Mozart, the twentieth century's innovators hewned their craft in the shadow of an established tradition. According to Straus, this shadow cast by the "masters" became so pervasive in society that the struggle for "creative independence" was "the central feature of modernism in all of the arts." ³⁷Among the three models of artistic influence, which are "influence as immaturity", "influence as generosity," and "influence as anxiety," the latter set forth by the literary critic Harold Bloom, is the most apt to describe this phenomenon.³⁸

³⁴ Joseph N. Straus, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge: Harvard University Press, 1990), 17.

³⁵ Straus, 3.

³⁶ Straus, 3.

³⁷ Straus, vii.

³⁸ Straus, 9-11. The more amicable "influence as generosity" was associated with T.S. Elliot and Charles Rosen.

Bloom's "influence as anxiety" model, which was applied to poetry, is captured well by this statement: "A poet... is not so much a man speaking to men as a man rebelling against being spoken to by a dead man (the precursor) outrageously more alive than himself!"³⁹ According to Bloom's model and its Strausian application to analysis, a burgeoning artist's primary concern is to "make room" for his own unique expression. Towards that end, an artist "misreads" the works of his predecessors. A misreading is not a failed interpretation rather it is a more profound one. The artist makes his predecessor over in his own image. "To read is to be dominated; to misread is to assert one's own priority..."⁴⁰ This is exactly what the five composers Straus selects do within their own repertory. Straus states that these five composers "use their idiomatic post-tonal procedures not only to produce musical coherence but simultaneously to comment ironically on the conventions of the past." ⁴¹ The Bloomian model does contain psychological overtones such as the Freudian Oedipal complex. However, Straus states that his primary concern is its implications for analysis. He does not claim this work as an examination of compositional psychology nor the creative process. He does not even claim it to be a comprehensive study of the composers and their works. Straus' primary concern is with "musical strategies of reinterpretation" and their impact upon musical constructions from this period. His goal is to provide "a critical framework for interpreting" what heretofore had been known as "allusions" in works by Stravinsky, Schoenberg, Bartok, Webern and Berg - the "exemplars of musical modernism." This critical framework is applicable to other musical styles and style periods, including jazz. Whereas Burkholder and Reynolds provide a list of suggested research questions and a typology, Straus sets forth the following as revisionary ratios or shared techniques to be found among composers: motivicization, generalization,

³⁹ Straus, 14.

⁴⁰ Straus, 14.

⁴¹ Straus, vii.

marginalization, centralization, compression, fragmentation, neutralization, and symmetricization.⁴² In a nutshell, motivicization and generalization deal with motives and their expression as pitch class sets. Marginalization and centralization refer to profound changes in structural organization. Compression and fragmentation deal with surface interactions between elements. Finally, neutralization and symmetricization involve the dissolution of tonal structures and function as post-tonal structures advance the agenda of its creators.

Here a comparison can be made between the Strausian framework and those discussed earlier. Straus' revisionary ratios fall under Burkholder's functional categories of variation and stylistic allusion. The majority of Straus' revisionary ratios constitute a detailed spectrum of variation technique. In contrast, Burkholder's framework is much broader, presenting a full gamut of functions for musical borrowing. It is also broad enough to encapsulate Agawu's listing of musical types and styles under the heading of stylistic allusion.

The applicability of Straus-Bloomian theory to jazz is discussed in John Murphy's

article, "The Joy of Influence,":43

I cite Bloom because his ideas are a justified reaction to earlier approaches to the analysis of poetry, which ignore extratextual data in favor of the syntactical relationships within a poem. Analyses of jazz improvisations that treat the written version in the same way as Western art-music composition would be treated do much the same thing. But it would be inappropriate to adopt Bloom's theory for the study of influence in jazz, because his ideas apply only to the Romantic and twentieth-century American poets about whom he writes. In other words, rather than applying criteria from the study of Western art music or literature to jazz, a holistic approach seeks the musical concepts and modes of interpretation that are suggested by the music and by African-American expressive culture in general.

I recognize the importance of distinguishing the differences between music and language and hazards of applying to music modes of analysis initially developed for language; nevertheless, I feel the theory of African-American literature proposed by literary critic Henry Louis Gates is relevant to the study of jazz improvisation for the following reasons: (1) an important early inspiration for the theory was as musical as it

⁴² Straus, 17.

⁴³ Murphy substitutes the word "joy" for "anxiety" as an indication of the difference of how African-American artists viewed music of the past.

was literary (I refer to Ralph Ellison's writings on African-American music), (2) the theory is attentive to the context and process of both literary creation and musical performance, and (3) its critical criteria are drawn from African-American expressive culture. Gates's theory, set out most fully in his book *The Signifying Monkey* (1988), rests on the concept of signification, not in its standard English sense of denotation or reference, but in its black-English sense of verbal figuration or repetition with a difference.⁴⁴

The fact that Murphy mentions Bloomian theory in his discussion testifies that there is some affinity present. The crux of his argument is that a literary framework geared towards African-American literature is better suited for the analysis of an African-American music. However, there are some points that Murphy has overlooked. Gates' analytical framework itself has affinities with Bloomian theory with its propensity for revision and intertextuality. Moreover, Murphy is overlooking the "double-voicedness" of "signifyin(g)." The "double-voicedness" of "signifyin(g)" speaks to a synthesis of European and African elements, which is inherent in both African-American literature and music. Lastly, adopting Gates theory to the exclusion of Bloomian theory neglects the mutual borrowing and shared concern for the past that is present in jazz and post-tonal music. Nevertheless, the above discussion by Murphy does demonstrate that the applicability of Bloomian theory to jazz has been considered in the current literature. Capitalizing on the commonalities between Bloomian theory and Louis Gates' theory yields the greatest benefit.

The Theories of Musical Borrowing and The Philosophy of Science

The following discussion will highlight aspects of each analytical framework that are most useful to this study. In addition, the ways that philosophy of science resonates with and expounds upon the objectives of these frameworks will also be discussed. Although Reynolds' analytical framework is geared towards nineteenth century music, his representation of allusion

⁴⁴John P. Murphy, "The Joy of Influence," *The Black Perspective in Music, Vol. 18, No. 1/2*: 8.

as a spectrum is universal to all style periods in classical music and jazz. His inclusion of those proposed connections between compositions that are not substantiated by historical evidence is particularly useful to this study and telling. In spite of the importance that Reynolds ascribes to historical context, his methodology does admit that it is at least possible to hear connections that are not immediately substantiated by historical evidence or scholastic convention. Whether a listener's conjecture is ill-informed or not is another matter entirely. The fact that it is at least possible to hear connections that are labeled as "unsubstantiated" by the analytical system, qualifies as a Kuhnian anomaly. According to Kuhnian paradigmatic theory, those unanswered questions or anomalies that are not satisfactorily addressed by the research program are grounds for revolutions.⁴⁵ The presence of anomalies such as these, prompts the analyst to look outside of Reynolds' existing analytical paradigm for answers. In Reynolds' system the following question is raised but yet goes unanswered: If historical context or evidence is absent, what can this perceived reference be attributed to?

Agawu presents a typology of *topoi* or musical types and styles. This world or "universe" of musical types and styles can be considered as a kind of taxonomy. Musical topics such as the dance, the learned style or counterpoint, and nationalistic style figure prominently in the taxonomy produced in this study. Agawu adds that "characteristic rhythms," and melodic patterns operate as "signs" to be interpreted by the listener. In this present study, the musical "signs" held in common by post-tonal music, jazz, and Bach style counterpoint are referred to as convergences. These convergences form strands which integrate into a unified compositional paradigm. According to Agawu's theory, changing cultural conventions account for the anomalies of listening. However, the potential is still there to look to other models, such

⁴⁵ Thomas Kuhn, "The Nature and Necessity of Scientific Revolutions," *Philosophy of Science: The Central Issues*. Martin Curd and J.A. Cover, eds. (W.W. Norton & Co.: New York, 1998): 90.

as Gates "signifyin(g)" paradigm, for further explanation of unintended cultural references.

Moreover, Agawu's model, which is designed to study earlier music, does not accommodate

the modernistic impulse which at once influences and unifies the proposed paradigm.

Nevertheless, in the analysis of individual works, which is the primary locus of his analytical

concern, Agawu posits a paradigmatic model:

Finally, a word about method: a paradigmatic analysis typically gathers the signifying units of a work into groups, columns, or paradigms and arranges each according to an explicit criterion. The number and content of the paradigms and their mode of succession in turn serve as a basis for interpreting musical meaning. By privileging repetition, the paradigmatic approach ensures that the outcome of an analytical proceeding remains intuitively in tune with what most musicians agree is the essence of tonal behavior. At the same time, paradigmatic charts make possible the telling of a number of stories about individual compositions. Some stories may corroborate conventional narratives; others may contradict them. For example, the paradigmatic approach often unveils circularity in the formal process, and this suggests a kind of counterstructure to the more conventional linear narrative. The interplay between circular and linear tendencies serves to complicate our view of the nature of musical form and musical discourse.

There are other gains from following a paradigmatic approach. By attending to the unfolding of contextually defined events, the analyst reconstructs a set of items of musical vocabulary that shows how a composer "speaks." Then also, gathering events into paradigms supports interpretation of a work as both a *logical form* and a *chronological form*.⁴⁶

Agawu's paradigmatic approach to analysis possesses a Kuhnian ethos. This approach treats an individual composition as a compositional paradigm unto itself, which is in keeping with Coenen's definition.⁴⁷ His paradigmatic approach is also used as a musical lexicon aiding in the translation of a system of "signs." Again, a need arises to look to another analytical model to not only relate multiple works but to relate works of various composers and styles which

constitute a larger paradigm.

⁴⁶ Kofi Agawu, *Music as Discourse: Semiotic Adventures in Romantic Music* (New York: Oxford University Press, 2009), 167.

⁴⁷ "Kuhn's 'community' must be translated in a flexible way, and can be defined as a 'compositional unity,' which may vary from a single work to a stylistic movement." Coenen, 204.

Unlike Reynolds' and Agawu's systems, which are based on classical music through the nineteenth century, Burkholder's framework is based on studies of early music and Ives. Its design is more general – applicable to numerous styles and style periods. In keeping with any scientific research program or paradigm, Burkholder provides acceptable research questions which guides the analyst to veritable outcomes.⁴⁸ He also provides a typology of borrowing procedures. Burkholder's analytical questions and typology lay the foundation for borrowing as a field of musicological inquiry. Burkholder's analytical program or paradigm provides tools and strategies for the study of compositional paradigms of all types, including the proposed paradigm of this study.⁴⁹ Almost like a scientific methodology, Burkholder's system relies heavily on empirical proof of borrowing provided by history and a verifiable function within the musical work. Burkholder does acknowledge that a listener can perceive references that the composer did not intend. He also acknowledges the existence of references that are not readily perceived by the listener. In both instances, however, all observations are only as credible as they can be substantiated historically and functionally. Just as in a scientific research program, all conjectures must be testable and verifiable. Unlike Reynolds' system, Burkholder's model does not recognize the existence of references that are not readily substantiated as the system requires. However, this omission does not nullify the existence of these anomalies. Hence, even under this system, a paradigm shift cannot be prevented as the analyst seeks another system that addresses anomalies of perception.

Burkholder's system certainly invokes philosophy of science as he seeks to create larger overarching relationships between groups of works. Categorizing instances of borrowing

⁴⁸ J. Peter Burkholder: 'Borrowing,' in *Grove Music Online. Oxford Music Online*, http://www.oxfordonline.com/oxford/grove/borrowing (accessed January 2013).

⁴⁹ Coenen, 204.

enabled him to make connections between variants of a single form. Burkholder asserts that taxonomic categorization was essential to his understanding of musical borrowing:

In my more modest study of Ives's methods and their development, getting the taxonomy right has been crucial for understanding the evolution. I could not have understood how his borrowing techniques developed until I could distinguish between different procedures. Once I did so, I began to see how they are related, how they draw on models and methods in the music of other composers, and what aspects of each are distinctive or new. 50

A complete picture of Charles Ives' compositional paradigm, necessitated a classification system, taxonomy, or typology. Contained in such a taxonomic organization is a catalog of functional types, each with its own subheading of classifications or tiers representing a pattern of change via variation. Although he does not favor the term "intertextuality," Burkholder's work illustrates that compositional paradigms are indeed networks of types with inherent hierarchical relationships. Through the process of borrowing, these compositional paradigms branch out to connect with other compositional paradigms – possibly forming new ones if the borrowing is mutual and sustained. Burkholder maintains:

We cannot fully understand any of the uses of existing music in isolation from the others. They evolved together, one growing out of another, so their histories intertwine. Their boundaries overlap, both in procedure and function. Finally by referring to other music, all types of borrowing force us to think of another piece of music, while we encounter the one in front of us, giving works that use existing music a special place in a musical tradition that esteems both the contributions of each composer or improviser and the repetition of the familiar. ⁵¹

If histories become intertwined through borrowing, then compositional paradigms can become intertwined while sustaining their own autonomy much in a way similar to the branches of vines. Musical taxonomies, which represent compositional paradigms, are in essence family trees. Through the mechanism of intertextuality, musical taxonomies are connected to other

⁵⁰ Burkholder, "The Uses of Existing Music," 856.

⁵¹ Burkholder, 859.

musical taxonomies which, in turn, are connected to others. The study of musical borrowing burgeons on a kind of musical genetics as traits and types can influence analyses and historical interpretations. Following Burkholder's lead, this study features its own taxonomy showing the structure of the proposed paradigm. However, the content of that taxonomy will be influenced by the theories of Agawu and Straus – the details of which will be returned to shortly.

Although Burkholder's system is based in part on the works of a twentieth century innovator, Charles Ives, it does not address the twentieth century exclusively nor its aesthetic impulse. The impetus behind borrowing in the twentieth century differs from that of earlier style periods. Moreover, as stated earlier, it is the shared modernist impulse that is a major unifying factor in the proposed paradigm. Hence, Burkholder's generalized theory does also necessitate a look to another analytical paradigm to address the unique profile of the twentieth century musicians and improvisers.

In contrast, Straus' framework deals with the aesthetic impulse of the twentieth century – engagement with the past. As stated earlier, it is a shared concern with music of the past between the post-tonal movement and jazz that solidifies the proposed paradigm. The concept of misreading is a unique feature of this analytical paradigm. It accounts for the unconventional ways twentieth century composers and improvisers, as listeners themselves, have invited their audiences to "rehear" both early compositions and contemporaneous compositions of other styles. These unconventional hearings of other compositions were in essence anomalies of perception. Allusion is indeed in the ear of the beholder. Therefore, misreadings are often products of theoretical analysis – howbeit formal or informal.

The Coenen-Kuhnian concept of compositional paradigms and the Straus-Bloomian concept of misreading in combination provide insight into how the proposed paradigm emerged

and behaves. Although post-tonal music is often considered as a branch in the history of Western art music, the post-tonal paradigm initially emerged as a result of a shift from the Classical-Romantic tradition. Post-tonal composers built upon the anomalies or musical problems of earlier classical epochs which included unprepared dissonances, extreme chromaticism, and increasing layers of contrapuntal complexity. They also found within jazz, the paradigm of the "other," musical ideas that they were unable to find in their existing paradigm of classical music. The post-tonal pursuit of the "other" was an indication of a compositional problem or rather an anomaly of perception that needed to be addressed. Likewise, jazz composers like Johnson and Gershwin heard within early music's art of counterpoint processes that would serve their creative ends. Moreover, jazz musicians wanted their music to be taken seriously. Engagement with the classical idiom created a needed dialogue as well as an opportunity for unspoken commentary. Also, jazz musicians heard within the post-tonal repertoire alternative solutions to "technical problems."⁵²

The following quote is from cultural critic Amiri Baraka:

BeBop is roots, now just as much as blues is. 'Classical' music is not. But 'classical' music, and I mean now contemporary Euro-American 'art' music, definitely can and should be 'milked' for as many *definitions* as possible, i.e., *solutions* to engineering problems the contemporary jazz musician's life is sure to raise... And I am merely trying to stress the fact that I believe the formal music of Europe can be used by modern jazz musicians to solve *technical* problems. 'How to play exactly what I feel,' is what one of these musicians told me...

Jazz musicians were not fully satisfied by the solutions provided by their existing paradigm, therefore, in like manner, they looked to another paradigm to address nagging

⁵² Lewis Porter, Jazz: A Century of Change (London: Prentice Hall International, 1997), 221.

anomalies. The anomalies of perception and unsolved problems of post-tonal and jazz musicians ultimately became the basis of borrowings and recompositions or misreadings. Although both post-tonal and jazz musicians sought to legitimize their own expressions by referencing the existing canon of early music and one another, a Kuhnian revolution occurred.

The misreadings of post-tonal and jazz musicians created a largely overlooked paradigm shift or revolution. A new paradigm emerged from combined elements taken from classical, jazz, and music of the past. The following is a commentary from cultural critic Amiri Baraka writing as Le Roi Jones. Here, he underscores this paradigm shift:

Ornette Coleman has had to live with the attitudes responsible for Anton Webern's music whether he knows that music or not. They were handed to him along with the whole history of formal Western music, and the musics that have come to characterize the Negro in the United States came to exist as they do today only through the acculturation of this entire history. And actually knowing that history, or those formal Euro-American musics, only adds to the indoctrination. But jazz and blues are Western musics; products of a Euro-American culture.

We are, all of us, *moderns*, whether we like it or not...⁵³

Baraka goes on to say that ideas and history affects everyone regardless of their walk of life. No one can escape the influence of history and ideas. Everyone is affected either directly or indirectly. In essence, jazz musicians were "handed" and consequently shaped by the same musical history as their post-tonal counterparts. Both jazz and post-tonal musicians considered themselves "moderns" with all of Western music history and culture – past and present – at their disposal. According to Baraka, this initiation into modernism was inevitable and could not be avoided. As both post-tonal and jazz musicians enter into dialogue with the past and one another – a paradigm shifts results. Hence, the proposed paradigm can certainly be characterized as eclectic, joining seemingly disparate elements. However, as indicated by the

⁵³ Porter, 221.

above commentary, both of the existing paradigms as well as the emerging paradigm were products of Western culture in America and Europe.

The analysis of works of this eclectic compositional paradigm requires a methodology or analytical paradigm that is also eclectic. None of the theories discussed is able to address the aspects of the proposed compositional paradigm alone. However, these theories are compatible enough to be used in combination. In this study, Burkholder's theories will aid in determining the function of borrowings. Moreover, Burkholder's reference to taxonomical science inspires the assembly of a taxonomy which categorizes and represents the types of borrowings within this compositional paradigm. In the formation of this taxonomy, Agawu's theory of topoi or topics proves beneficial. Agawu's inventory of musical topics provides a compatible description of the types of borrowings that will be discussed in this study. Straus' revisionary ratios provide a vocabulary to discuss motivic borrowings and their impact on structural organizations. Agawu's theory of semiotics and Gates' theory of "signifyin(g)" find partial application as Straus' motivic borrowings are interpreted as carriers of meaning and style.

In addition, the Straus-Bloomian concept of misreading finds application because it illuminates the creative logic of this compositional paradigm. The concept of misreading also serves as a useful tool for analysis of these musical works. As stated earlier, twentieth-century composers and improvisers invite their audiences to "rehear" the familiar. Their audiences undoubtedly include analysts. An analyst would be remiss to discount the commentary, philosophy, and theoretical analyses of twentieth-century composers and improvisers. To do so suggests an analytical perspective predicated upon the concept of absolute music. The concept of absolute music is incompatible with the study of borrowing and allusion, which inherently suggests that music conveys meaning. Moreover, the musician commentary, philosophy, and theoretical analyses are integral parts of the body of historical evidence which under girds studies of this type. Nevertheless, in keeping with the analytical theories discussed, all suggested rehearings are to be tempered by evidence as found in the music.

The Representative Works of the Proposed Paradigm

The selection of representative works for this study was based on historical evidence, composer commentary, and an audible engagement of post-tonality, jazz, and counterpoint. The composers of these works fall into four categories according to their originating paradigm and level of borrowing from music of the past as well as their stylistic counterpart. The four categories are the following: post-tonal composers with documented interest in jazz and Bach style counterpoint; jazz composers with documented interest in post-tonal music and Bach style counterpoint; post-tonal composers with documented exposure to jazz, who allude to jazz as well as contrapuntal forms and textures; and jazz composers with documented exposure to post-tonal music, who allude to post-tonal style as well as contrapuntal forms and textures. See table below.

Post-tonal Composers	Jazz Composers	Post-tonal Composers	Jazz Composers
with interest in	with interest in	that allude to	that allude to
Jazz and Bach	Post-tonality and	Jazz and counterpoint	Post-tonality
Counterpoint	Bach counterpoint		and counterpoint
Hector Villa Lobos	Dave Brubeck	Alban Berg	Miles Davis
William Bolcom	David van Kriedt	Claude Debussy	Charles Mingus
Paul Hindemith	Bud Powell	Bela Bartok	Scott Joplin
Maurice Ravel	John Lewis		Art Tatum
Igor Stravinsky	Jacques Loussier		Duke Ellington
Darius Milhaud	George Gershwin		-
Charles Ives			
Gyorgy Ligeti			

Table 2-1: Representative	Composers of	of this Compositional	Paradigm.
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Included among the selected works are those that reference ragtime, blues, Brazilian music, and African-American derived styles, such the cakewalk. These are regarded as pre-jazz forms that

are closely related to jazz.⁵⁴ In addition, works were selected from different time periods of the twentieth century, even as recently as the last decades. Each of the time periods selected represents significant developmental milestones in the proposed paradigm. The last decades of the century saw some important developments that must be recognized. For example, Milhaud's former students, William Bolcom and Dave Brubeck, created a body of works during the last decades of the century that overtly sought to unify the three strands of the paradigm.⁵⁵

Additionally, many of milestones of the century involved the continued development of counterpoint among both jazz and post-tonal composers. Among the jazz works selected, there are complex textures which allude to contrapuntal technique – including the early ragtime works of Scott Joplin. Decades later, the epoch of Miles Davis and the Cool School also produced examples of contrapuntal complexity. Next, beginning in the 1960s and spanning into the latter part of the century, a movement of jazz recompositions of Bach emerged, including works by John Lewis and Jacques Loussier.

Among post-tonal composers, borrowing also occurred in the context of an increasing complexity of contrapuntal technique. This began as early as Milhaud, Stravinsky, and Ives. For Charles Ives, this increasing complexity, as represented by fugues in multiple keys, was an indication that contrapuntal technique was evolving.

⁵⁴ Carol Lems-Dworkin, Africa in Scott Joplin's Music (Evanston, IL: Carol Lems-Dworkin, 1991), 12.

⁵⁵ Bolcom: "How do you get people to pay real attention to music again?... What clearly is lacking is ... a

marrying, between the old, aristocratic, and the new, popular, demotic musical cultures. Together, they can nourish each other; separately, both suffer."

Dan K. Alexander maintains: "Persisting in his efforts to marry different cultures by addressing a diverse audience on multiple levels, Bolcom has begun to achieve in his works an almost perfect synthesis of contrasts, fusing a universe of style and gesture into a single, rich language."

Dan K. Alexander, "Works for Piano by William Bolcom: A Study in the Development of Musical Postmodernism" (DMA diss., University of Cincinnati, 1994), 90-91.

Eddie Meadows states: "Brubeck's compositions share generic chord structures, meter variations, and a fusion of jazz and classical elements. It is this fusion that led many musicians—both classical and jazz—to dismiss Brubeck's music."

Eddie S. Meadows, Bebop to Cool: Context, Ideology, and Musical identity (Westport, Conn.: Praeger, 2003), 268.

According to Ives's values and those of his father, these kinds of innovative fugal procedures were at the very least, attempts to strive for relevancy, if only by articulating a step in music's evolution...⁵⁶

The advancement of counterpoint began with dissociation, as observed in the music of Stravinsky and Ives. Dissociation is "a contrapuntal structure that organizes the texture into highly differentiated and harmonically independent musical layers."⁵⁷ Dissociation is often marked by competing or bitonal key centers. By the time of Ligeti, counterpoint found its culmination being fully evolved into what is known as musical space. According to Ligeti, musical space is characterized by a counterpoint between sound masses or "volumes, masses, and planes." Under Ligeti, the advancement of counterpoint progresses into zero form and micropolyphony.⁵⁸ Ligeti's musical space goes hand in hand with his propensity to borrow from jazz and African idioms as evidenced by his *Etudes*. Hence, a byproduct of the engagement of post-tonal music, jazz, and counterpoint in the twentieth century is the advancement of counterpoint itself, resulting in musical space. Therefore, the inclusion of Post-World War II works is indispensable to the study of this compositional paradigm.

Misreadings and Recompositions of Bach counterpoint

J.S. Bach has been chosen as a representative for music of the past or historical counterpoint due to his influence among post-tonal and jazz musicians alike. The evidences of his influence span from the Bach recompositions of the Second Viennese School to the body of works by jazz composers including Dave Brubeck, whose studies with Milhaud included a

⁵⁶ Carol Baron, "Father Knew (and Filled me up with) Bach: Bach and Ives affinities in Lines and Spaces," in *Bach Perspectives, Vol. 5: Bach in America* (Chicago: University of Illinois Press, 2003), 152.

⁵⁷ Lynne Rogers, "Stravinsky's Break With Contrapuntal Tradition: A Sketch Study," *The Journal of Musicology*, Vol. 13, No.4 (Autumn 1995): 476.

⁵⁸ Ligeti traced the onset of zero form or musical space back to Schoenberg. He also maintained that the regular use of tone clusters signaled the onset of musical space. In the works of Milhaud found in this study, tone clusters are readily found. Hence, the seeds of this increasing contrapuntal complexity are found in the earliest examples. In order to deal with these works accurately, they must be analyzed in the context of an evolving technique called musical space.

saturation with Bach chorales. In "Bach's Posthumous Role in Music History," Ludwig Finscher calls for the assemblage of a typology of Bach references that includes the twentieth century. He asserts: "There is no composer who has written music history so long after his death…"⁵⁹ References to music of the past which engage Bach style counterpoint or contrapuntal style in general, are often the result of novel analytical misreadings. An examination of theoretical impulses shared by composers of this compositional paradigm as well as those who influenced them, can provide additional insight into the ideology that unifies the paradigm. Let us take a moment to consider some examples.

Although Schoenberg is not noted in this study as a member of this compositional paradigm, his theories and musical analyses of Bach are an undeniable influence on his former students who are, such as Alban Berg and Dave Brubeck. As stated earlier, Schoenberg often read himself into Bach's works. Straus maintains that Schoenberg considered Bach as "a prototypical Schoenberg."⁶⁰ Regarding Bach's Fugue no. 24 in B minor from the *Well-Tempered Clavier*, Schoenberg maintains:

I used to say, 'Bach is the first composer with twelve tones.' This was a joke, of course. I did not even know whether somebody before him might not have deserved this title. But the truth on which this statement is based is that the Fugue No. 24 of the first volume of the *Well-Tempered Clavier*, in B minor, begins with a *Dux* in which all twelve tones appear... It is an exceptional case; even in this fugue the *Comes* consists of only eleven different tones, and of the twelve repetitions and transpositions, only seven are complete, while five omit one or two of the twelve tones... But what is more important here is that this fugue deserves the title of 'chromatic fugue' more rightfully than the one which is usually called so. It approaches a style of chromaticism in a manner different from Bach's ordinary procedure.⁶¹

⁵⁹ Finscher, 21.

⁶⁰ Straus, 44.

⁶¹ Arnold Schoenberg, *Style and Idea: Selected Writings of Arnold Schoenberg*, ed. Leonard Stein, trans. Leo Black (London: Faber & Faber, 1975), 250.



Moreover, Schoenberg, not being the first, never ceased to capitalize on Bach's audacious dissonances:

But if one writes a sustained chord, b#-d#-f#, in the right hand for the piano, and adds an eighth note melody, g#-f#-e-d#-c#-b, this produces horrible, incomprehensive dissonances, and I am glad it was not I who first wrote that sort of thing, but Johann Sebastian Bach. His contemporaries could not understand that. We no longer find it so difficult; we know that the terrible dissonances, b#-c# and b#-b, are not stopping places on the eighth notes route that they pass safely by and reach a bomb-proof shelter, an a, whose consonance with the f# once again restores harmony.⁶²

In his *Structural Functions of Harmony*, Schoenberg cites a passage from Bach's *Chromatic Fantasy*, with its non-functional progression of deferred and non-resolving diminished and dominant sevenths, as an example of extended tonality. In extended tonality there are remote transformations (or altered chords) and successions of harmonies.⁶³ As stated earlier, Schoenberg and the Second Viennese School, were known for their recompositions of Bach. In his orchestration of a Bach chorale prelude (BWV 654), Schoenberg exhibits the revisionary ratio of centralization to intensify the importance of the motivic third.

⁶² Stein, 134.

⁶³ Arnold Schoenberg, *Structural Functions of Harmony* (New York: W.W. Norton & Company, 1954), 79. In *Structural Functions of Harmony*, Schoenberg does not indicate which passage the progression comes from. Schoenberg uses the strike-through symbols as an indication of an alteration of a scale degree's harmony. The association of altered chords with a scale degree within a key reinforces his theory of monotonality, which usurps the concept of modulation. His theory of monotonality was an important link that connected his avante-garde expression with music of the past.

Stravinsky's analytical perspective can be discerned in his recomposition of early works which include Bach. In his recomposition of Bach's *Canonic Variations*, which is based on the chorale melody "Vom Himmel hoch," Stravinsky adds additional contrapuntal lines, emphasizes syncopations with doublings, and inserts one of his "signature sonorities", [0257].⁶⁴

Darius Milhaud is also known for his analytical misreadings of Bach. In his 1923 article *Polytonality and Atonality*, Milhaud cited this moment in Bach's duetto no. 2, as F minor transitioning to C minor, as an example of polytonality. ⁶⁵



Example 2-2: Bach Duetto no. 2, measures 91-97.

Bach has even been accused of utilizing the whole tone collection in measure 15-16 of a sarabande from Suite BWV 808.



Example 2-3: Bach Sarabande from Suite BWV 808.

⁶⁴ Straus, 65-66.

⁶⁵ Angelo Cantoni, *La Reference a Bach dans les oeuvres neo-classiques de Stravinsky* (Hildesheim: George Oms Verlag, 1998), 11.

In contrast to these earlier examples, which concern themselves primarily with pitch simultaneities resulting from counterpoint, Gershwin cites a rhythmic propensity in Bach that resonates with jazz. In a 1932 interview, Gershwin asserts: "There are passages of Jazz in Bach and I understand in Beethoven."⁶⁶ However, Gershwin never stated specifically which Bach works exhibited that propensity. There is a dotted eighth note motive in a C minor gigue, from the second of J.S. Bach's *Six French Suites*, that occurs in rapid succession creating a sensation similar to the "swing feel" in jazz. An interpretation of this gigue that accents the third beat can certainly provide grounds for a misreading. As Thomas Christensen stated earlier, "Bach's music invites conflicting interpretations..."⁶⁷



Example 2-4: Bach Gigue in C minor.

⁶⁶ Henry Pollack, "Gershwin, his life and work," 170.

⁶⁷ Thomas Christensen, "Bach among the Theorists," in *Bach Perspectives, Volume 3 Creative Responses to Bach from Mozart to Hindemith* (Urbana: University of Illinois Press, 2003), 45-6.

The commonalities between the French Baroque practice of note inegales and the swing feel in jazz also comes to mind.

CHAPTER 3

CONVERGENCES OF POST-TONALITY, JAZZ, AND COUNTERPOINT

As stated by Dmitri Tymoczko, post-tonal and jazz musicians in the twentieth century were "like mountaineers climbing the same mountain from different sides." ¹This study will reveal that post-tonal music and jazz have in common the following elements: a propensity for borrowing and allusion; post-tonal harmonic vocabularies, motivic variation, and an affinity for counterpoint. It is no surprise that counterpoint is a shared affinity. As stated earlier, there is a special allegiance between borrowing and counterpoint. Firstly, the connection goes back to early Western music when borrowing and intertextuality occurred in the context of counterpoint. Secondly, borrowing and counterpoint are both closely allied to the art of rhetoric, being carriers of meaning.² As borrowing and counterpoint meet in the context of twentieth century, their affinity and concurrent development is evident once again. Together they become defining characteristics of a paradigm that engages post-tonal music, jazz, and counterpoint.

In her discussion of "Polyphonic Forms and Devices in Modern American Music," Dorothy Slepian touches upon the relationship between these three idioms of the proposed paradigm: "Thus, biting dissonances, jazz, folk songs, and other elements color the time-

² Burkholder, 870. Burkholder states that often in the 16th century borrowing was used as an expressive device, rhetorical figure, or method of illustrating a textual image.

¹ Dmitri Tymoczko, "The Consecutive-Semitone Constraint on Scalar Structure: A Link between Impressionism and Jazz," *Integral*, Vol. II (1997): 173.

Daniel Harrison, "Rhetoric and Fugue: An Analytical Application," *Music Theory Spectrum*, Vol. 12, No.1 (Spring 1990), 1-42. In this article, Daniel Harrison studies fugue as a "rhetorical discourse."

[&]quot;In the seventeenth and eighteenth centuries, links between music and rhetoric were frequently acknowledged and occasionally theorized..."

Kofi Agawu, Music as Discourse: Semiotic Adventures in Romantic Music (New York: Oxford University Press), 15.

honored art of counterpoint."³ This statement describes a relationship in which counterpoint takes precedence over the idioms of post-tonality and jazz, which are referenced by the phrases "biting dissonances" and "folk songs", respectively. Within this paradigm, there are certainly examples such as Villa Lobos' fugue from *Bachianas Brasilieras* in which counterpoint takes precedence over the other two idioms. However, this is only one configuration of how the three idioms interact. There are also examples of post-tonality and counterpoint coloring the jazz idiom such as Davis' "Moon Dreams" and "Israel." Moreover, Ives' *Thoreau* is an example of how jazz and counterpoint color the post-tonal idiom.

The relationship between these three idioms is similar to how Humphrey Searle describes the relationship between harmony and counterpoint:

Harmony and counterpoint are of course the obverse and reverse sides of the medal, and it is impossible to treat them as separate entities; but it remains true that in different periods of history one or other of them tends to become the dominant factor for a certain time.⁴

Similarly, post-tonality, jazz, and Baroque-inspired counterpoint are like faces of a polyhedron. Each idiom can provide analytical insight into the others. Although there is an equality between the idioms, the basis of the interrelation, in addition to mutual borrowing, is counterpoint. Both post-tonal music and jazz can be discussed in contrapuntal terms. Thereby, the relationship between these idioms reflects Euclid's axiom: "Things which are equal to the same thing are equal to one another." Hence, post-tonal vocabularies can be interpreted in the light of jazz nomenclature and contrapuntal devices. Jazz works can be discussed in terms of post-tonal vocabularies and contrapuntal devices. Since, post-tonality and jazz can be interpreted as a

³ Dorothy Slepian, "Polyphonic Forms and Devices in Modern American Music," *The Musical Quarterly*, Vol. 33, No. 3 (July 1947): 325-6.

⁴ Humphrey Searle, *Twentieth Century Counterpoint: A Guide for Students* (New York: John de Graff Inc., 1954), 3.

result of contrapuntal processes the converse is true. The compositional thinking of both posttonal and jazz composers can elucidate Baroque inspired counterpoint in terms of post-tonal procedures and the jazz style.

There is a myriad of configurations representing how the three idioms interact and intersect. These interactions result in two phenomena: musical convergences and misreadings of musical style. The misreadings of musical style will be addressed later in the last chapters of this study. Chapters 3-6 will focus on the former – musical convergences. In biological science, convergences occur when unrelated species sharing the same environment develop analogous structures or traits. A similar phenomenon can be observed as post-tonality and jazz, in combination with music of the past, converge upon shared aspects. Convergences between these three idioms involve the following: post-tonal harmonic structures, jazz motives, and counterpoint. These convergences constitute a common typology of "signs."⁵

Post-tonal music and jazz's mutual employment of post-tonal vocabularies and motivic processes resulted in harmonic convergences. These harmonic convergences are a result of tonality being supplanted by alternative pitch organizations and referential collections as set forth by both post-tonality and jazz. The harmonic convergences that have been identified include: promissory notes, intervallic motives, referential collections including blues/jazz scales, altered chords, and Neo-Riemannian/non-functional progressions. These harmonic convergences are the result of both post-tonal and jazz musicians engaging the harmonic structures and progressions of Western music history. Representative works include: Tatum's "Jitterbug Waltz" and the ragtime movement from Hindemith's *Suite 1922*.

The shared propensity for borrowing and allusion has led to a spectrum of motivic convergences, which come primarily from the jazz idiom. Jazz improvisational aesthetic, which

⁵ Agawu states that there must be a sign, object or idea, and an interpretant.

constantly sought new ideas and new ways of developing existing ideas, spilled over into the movement of its post-tonal counterpart. As a result, jazz motivic material began to appear in differing contexts. New contexts conferred on them new meanings. These motivic convergences are described in terms of pitch and rhythm – jazz licks/inflections and the dotted rhythm or the Scotch snap. Examples are found in Stravinsky's *Ragtime for Eleven Instruments*, Berg's *Lulu*, and Ellington's *Concerto for Cootie*.

Regarding the contrapuntal convergences encountered this paradigm, Slepian asserts: "polyphonic forms and devices constitute an integral part of the musical thought of contemporary American composers."⁶ Within the proposed paradigm, the processes of historical counterpoint were reinterpreted and expanded. The result was the following contrapuntal convergences: voice exchange and imitation, countermelodic dynamism, canon, and eventually the expansion into musical space. Examples include Gershwin's "Crap Game fugue" from *Porgy and Bess* and Villa Lobos' fugue from *Bachianas Brasilieras No.1*.

Harmonic Convergences: Intervallic Motives

The undermining of traditional tonality through the assignment of motivic and structural significance to melodic intervals, harmonic intervals and ultimately, intervallic cells, is one of the hallmarks of the post-tonal movement. It is less recognized that jazz composers, who sharing the same modernistic impulses and sensibilities, also assigned significance to intervallic motives. Intervallic motives reflect how many post-tonal and jazz musicians heard music. For example, Schoenberg's recomposition of Bach's Chorale Prelude in E-flat places an emphasis on a motivic interval of a third.⁷ Moreover, the use of intervallic motives exists along a

⁶ Slepian, 325-6.

⁷ Joseph N. Straus, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge: Harvard University Press, 1990), 14-15.

continuum which leads to more progressive works, and alternative organizations⁸ that replace common practice tonality. Of course, intervallic motives have always existed since the advent of Western music. However, as music evolved to the present-day, the importance of intervallic motives grew in unprecedented ways in common practice tonality. Works such as Hindemith's Suite 1922, Tatum's "Jitterbug Waltz," Milhaud's Trois Caprices, Bolcom's Second Violin Sonata, and Davis' "Moon Dreams" assign motivic and structural significance to clusters, quartal constructions as well as melodic and harmonic intervals of all sizes. Of particular interest is the extensive motivicization of seconds, thirds, fourths, and tritones within this paradigm. In addition to repetition, intervals are motivicized through gap-fill and fill-gap gestures. Motivic intervals also have a role in novel chord voicings, such as those found in the Miles Davis example. In fact, there is a connection between these novel chord voicings and jazz dominant extended chord voicing patterns such as 3-7-9 (a tritone plus and a 3rd) and 7-3-6 (tritone plus a 4th). In examples such as Art Tatum's "Jitterbug Waltz," a connection between intervallic motives, altered chords of jazz nomenclature, quartal chords, and clusters can be observed. Moreover, trichords and sonorities resembling Ligeti signals begin to emerge in examples such as Bolcom and Gershwin. Lastly, intervallic motives can also become catalysts to stylistic experimentation/allusion as well as the emergence of the musical space of Ligeti and Varese.

In Miles Davis' "Israel," amidst the dense contrapuntal textures, there are melodic gestures outlining intervals of a fourth, fifth, and minor seventh. As these melodic gestures are subjected to variation, a series of pitch class cells begin to emerge. These motivic intervals and pitch class sets are delineated by contour, rhythm, rests, and repetition throughout the work.

⁸ Alternative organizations refer to any pitch organization other than traditional tonality and traditional modal music – particularly those pitch organizations coming out of the twentieth century.

Below are examples highlighting intervallic outlines and pitch class set labelings of motivic gestures.

As the introduction draws to a close before an approaching A section, the alto sax reiterates the notes {C, B-flat, G, F} from the ensemble's opening gesture. These notes constitute the set [0257], which will soon acquire motivic significance. The repetitive gestures are answered by the baritone sax and trombone, playing a descending bebop scale on C consisting of two sevenths.

In measure 9, the main theme enters at the unison and octave played by the alto sax, baritone sax, and trumpet in the absence of brass accompaniment. This melody is triadic embellished by neighboring and gap-fill gestures, filling the gaps between G-C-G (see example 3-1). It has an additive character like Milhaud's fugal subject from *Creation du monde*. Just as in the Milhaud example, immediately after the initial statement of a few notes, they are then repeated and embellished by interpolation. The first four notes also belong to set [0257]. The melodic space opens up in measure 11, expanding downward from D to G then G to F and F back to G. It is in these same measures that the G dominant seventh harmony is prolonged.



Example 3-1: a) The motivic contours and intervals from Miles Davis "Israel," measures 9-20; b) The motivic pitch class sets from Miles Davis' "Israel," measures 9-20.

Most of these sets in measures 12-20 are in close proximity to one another in parsimonious, set class voice leading space.⁹ There is long-range melodic movement from C to G in measures 17-20 that is stalled on F-sharp in the last two measures. Note G is finally reached melodically in the next section.

In the "Crap Game Fugue" from Gershwin's *Porgy and Bess*, motivic intervals such as the third and fourth are established by repetition and gap-fill gestures. The episodic development that we come to expect in the traditional fugue is replaced in this misreading by the development of intervallic motives and their expanded form as pitch class sets. The fugue opens with the subject largely featuring the motivic intervals outlining a third and a fourth (see example 3-2). The free counterpoint that accompanies the subject consists largely of parallel third dyads with the addition of a couple of sixths. This emphasis on minor thirds is one of Gershwin's trademarks.¹⁰



Example 3-2: Gershwin "Crap Game Fugue" from Porgy and Bess, measures 1-3.

A closer inspection of the subject reveals a construction largely based on the repetition of notes $\{D, F\text{-sharp}, G\}$, the dominant pedal followed by a F-sharp – G dyad, forming set [015]. The D pedal in combination with the E-F dyad and the A-B dyad forms sets [013] and [025],

⁹ Joseph N. Straus, "Uniformity, Balance, and Smoothness in Atonal Voice Leading," *Music Theory Spectrum*, Vol. 25, No. 2 (Autumn 2003): 305-352.

¹⁰ These minor thirds evoke the blues.
respectively. These set notations highlight the intervallic content of the passage which takes precedence over traditional tonal organization. Moreover, within the succession of gestures in the first two measures, the gap-fill technique can be observed. In measure 1, the interval that occurs between the D pedal and the F-sharp is filled in by the combination of the reiterated D and the subsequent E - F-natural dyad. Likewise, in the next measure the interval of a fifth which occurs between the D pedal and note A is filled in by the reiterated D and the returning F-sharp – G dyad. A fill-gap gesture is observed in measure three, in the left hand of the piano reduction, as the series of parallel thirds outlining a third alternate with a leap of a third.

As the subject returns in G minor, in measures 13-16, the initially withheld countersubject outlines a series of fourths and then thirds (see example 3-3). The fill-gap gesture appears again as each filled in fourth and third alternates with a skip of the same size. Initially, there is a moment of imitation between the countersubject and the free bass line



Example 3-3: Gershwin "Crap Game Fugue" from *Porgy and Bess*, measures 13-16. gesture {C, B-flat, A G}, which is followed by a leap between G and C moving from the countersubject to the bass. Later in this study, there will be a thorough discussion of the counterpoint in this fugue. As this passage ensues, the free bass line outlines one more fourth before arpeggiatiating the B-flat major triad. These skips of a third from the B-flat triad reinforce the motivic third of the fugue. Along with the subject, there is a continuous overlap

and rhythmic conflict between three-note gestures in the texture. Similar textures are found in the entrances of the subject. In the example, the brackets highlight intervals of a third and a fourth.

As Crown renders the fatal blow to Robbins, beginning in measure 72, there is the chromatic ascent of near-note clusters over chromatically ascending parallel thirds (see example 3-4 and 3-5).¹¹ Each of these near-note clusters in the right hand forms set [025], a voice leading offset from set [015] present in the fugal subject.¹² Moreover, as the set notation indicates, these near-note clusters both outline the motivic fourth and contain the motivic third. These near- note clusters also anticipate what will be later known as a Ligeti signal, which is "a fourth made up of a minor third and a major second or the other way around."¹³



Example 3-4: Gershwin "Crap Game Fugue" from Porgy and Bess, measures 67-75.

Indeed, these are fourths made of major seconds and minor thirds. Surely, while this predates Ligeti, it is indicative of the compositional thinking prevalent among both post-tonal and jazz composers to the end of the twentieth century. Each near-note cluster in combination with a third dyad in the left hand forms pentachord set [01469]. This set has the following subset-

¹¹ These sonorities are referred to as near note clusters since they are one note away from being complete note clusters. Normally the constituents of note clusters occupy the entire intervallic space. Although, these sonorities are not completely note clusters they are significant to the evolving use of these sonorities.

¹² Joseph N. Straus, "Uniformity, Balance, and Smoothness in Atonal Voice Leading,"

Music Theory Spectrum, Vol. 25, No. 2 (Autumn 2003): 305-352.

¹³ Richard Toop, *Gyorgy Ligeti* (London: Phaidon Press Ltd., 1999), 173.

superset relationship with set [013479] encountered in the measures before. They are also voice leading off-sets of one another.



Example 3-5: Gershwin "Crap Game Fugue" from Porgy and Bess, measures 73-75.

In Davis' "Moon Dreams," intervallic motives are generated by a descending interval and its transformation. The motivic significance of this descending interval is established by repetition and duration, as the interval expands, contracts, and inverts. In addition, each instance of the downward interval and its derivatives is connected by arpeggiations. As the solo section approaches, this motive is subjected to diminution and filled in by interpolation. Below, in example 3-6, is the middleground of a modified Schenkerian style graph of the head of this arrangement. The downward motive is notated as an unfolding. The connecting arpeggiations found between instances of the downward motive are regarded as surface details and have been removed. This graph shows how the downward motive obscures the perception of a Schenkerian melodic descent. In fact, a compound melodic line emerges from the reiteration of this intervallic motive. Thirds and fourths make up the majority of the appearances of this downward motive in the soprano and bass. Seconds appear at the beginning and closing of phrases such as in measures 1, 17, 24, and 25. This implies a structural function. Contraction of the interval to its smallest form – the second – communicates a momentary cessation or repose. On the other hand, expansion and fluctuation of the interval creates a sense of progression and motion. In the bass, the downward motive appears mostly as fourths and fifths.

Meanwhile, there is a vertical dimension to this downward motive as well (see example 3-7). In the opening passage, the downward motive is woven in the heterophony. The alto sax plays a descending third, from concert A to F-sharp; while the trombone and tuba go down a minor 6th, from F down to A and B-flat down to D, respectively. Concurrently, the horn and baritone sax go down a minor second. Davis' trumpet stands out of the texture not only in register but in its inversion of the same gesture – playing up a major second. However, in the second half of the opening phrase, the trumpet plays a descending third, concert A down to F-sharp, which is an octave above the alto sax. At the same time, the horn and baritone sax play descending tritones. The trombone again plays a descending minor sixth transposed up a fourth. This time it is the tuba that inverts the downward gesture with an ascending major third.



Example 3-6: Modified Schenker graph of Davis "Moon Dreams," measures 1-23.

The intervallic motives of "Moon Dreams" play an integral part in its sonoric structures. The voicings of altered chords with added notes also generate the intervallic motives of seconds, fourths and clusters in the constantly shifting chordal textures. This yields the distinctive, rich harmonic colors associated with the Cool School sound. The first sonority, a DM9, found in the first measure, features a raised ninth, E-sharp, and the major 9th, E-natural (see example 3-7). There is an added sixth or raised 5th, B-flat, in the bass. As a result, seconds are present in the chord voicing, including E and F as well as D and E. Moreover, in the first sonority there is a stacking of fourths from B-flat to E to A to D. In the last half of the first measure, close voicing expands and the second dyads disappear. Quartal voicings also shift in the texture. The harmonic interval held between the tuba and baritone sax, B-flat and E-natural, continues between the horn and trumpet, with the notes C-sharp and F-sharp in the octave above. The harmonic interval held by the alto sax and the horn, consisting of A and D, continues with the trombone and baritone sax, playing the same notes an octave below. In the example below, the fourths and their shifting positions are highlighted.



Example 3-7: Verticalities from Miles Davis "Moon Dreams," measures 1-5.

There is a homophonic eighth note linking gesture in second half of measure 2 that is voiced with a concentration of second dyads in the tenor range, thereby creating near-clusters. These near-clusters are generated by the presence of a raised 5th or added 6th along with a 9th and 11th.

In these opening measures, measures 1-4, a DM9 is being prolonged. Although a single harmony is being prolonged, there is a sense of motion and voice leading. This could very well

resemble Ligeti's micropolyphony, which is known for its paradoxical voice leading in the midst of seeming stasis. In measures 3-4, the downward melodic gesture is primarily articulated in harmonic tritones and fourths. Harmonic tritones and fourths also predominate in the textural voicings.

Fourth voicings are retained in the GM7 with an added 6th found in measure 5. As seen in example 3-8, measures 6-8 provide contrast with the previous section, with greater rhythmic and harmonic motion. There is also a change in harmonic voicing patterns. Quartal voicings have given way to parallel fourths and fifths in the inner voices as indicated by the horizontal brackets. The parallel movement of the inner voices also contrast with the contrary motion between the outer voices. Voice crossings are indicated by the dotted lines. Nevertheless, there continues to be a near alternation of close and open voicings. There are three instances of second dyads between voices.



Example 3-8: Verticalities from Miles Davis "Moon Dreams," measures 6-8.

In "Blue, Blue, Blue" from Gershwin's *Let 'Em Eat Cake*, intervallic motives influence sonority construction and carry structural weight. Firstly, in the first two measures, quartal voicings are evident in the accompaniment (see example 3-9). Quartal voicings are also evident in the voicings of the structurally significant D7 chord in measure 7 and the D9 in measures 21 and 33. The structural significance of the D7/D9 chords will be discussed in greater depth below.



Example 3-9: Gershwin "Blue, Blue, Blue" harmonic sketch of measures 1-2 and 21.

The interval of a third, which Gilbert identifies as Gershwin's trademark, is also motivic to this piece.¹⁴ The harmonies of measures 1-4 are transposed up a minor third in measures 8-11. Moreover, with the exception of the third and fourth chords which are a tritone apart, each successive harmony in the verse section is a third apart: G9, E-flat 9, F-sharp 9, C9, A9, F-sharp 9, and A9. From measures 3-7, the root motion arpeggiates a F-sharp diminished triad. Additionally, between strong beats each individual voice outlines a minor third (see example 3-10). The chord progressions of this first section also bear great similarity to Neo-Riemannian progressions which will be discussed later in this study. In measures 8-11, the root motion arpeggiates an A diminished triad. Both the F-sharp diminished and diminished harmonies are subsets of the motivically significant D7/D9 chords.



Example 3-10: Gershwin "Blue, Blue, Blue" measures 3-4.

Let us turn our attention to the melodic line. The melodic outline reveals a progression of minor thirds. Measures 2-6 features a monotone, recitative-like melody that sits on note Fsharp. In measures 8-11, the melody consists of a series of note A's. Following the onset of the

¹⁴ Gilbert, 278.

refrain which begins on note C, a more varied melody ensues whose high point is E5. All of these notes together are constituents of the D9 sonority, which is structurally significant in this piece (see example 3-11); the D9 and D7 sonority are found at key places in the piece. Firstly, the D7 sonority is found in a substantial half cadence in measure seven of the verse. In addition, in the refrain, D7 and D9 punctuate the final "blue" of each chorus of "Blue, Blue Blue." Each punctuation is reinforced by a melodic leap into the higher register.



Example 3-11: Gershwin "Blue, Blue, Blue" melodic sketch.

In addition to the intervals of a third and fourth, the tritone is also of significance to this piece. As stated earlier, the third and fourth chords feature a tritone relationship. Moreover, in measures 1-12, there are diminished fifth and augmented fourth voicings between the bass and tenor voices of the accompaniment. Synchronous with these parallel tritones are parallel minor sevenths between the bass and alto voices as well as parallel major thirds between the tenor and alto part. On the strong beats of measures 3-11, excluding the reiterated tones of the soprano voice, each sonority is constructed from an intervallic pattern that is prevalent in the jazz vernacular as denoted by the label "3-7-9."¹⁵ These dominant comping gestures are often voiced according to a "3-7-9" pattern, a tritone plus a major third, which usually alternates with the "7-3-6" pattern, a tritone plus a perfect fourth.¹⁶ However, in the Gershwin example, this alternation with its complimentary pattern is not necessary due to the chromatic lines that connect each sonority.

¹⁵ The label "3-7-9" refers to a pattern for voicing the chord tones of dominant sonorities.

¹⁶ Steve Dancz, Jazz Improvisation Lecture, University of Georgia.

The interval of a tritone also figures prominently in the chromatic melodic descent of the alto and tenor lines which both span a diminished fifth. In both the alto and tenor lines, once the interval of a diminished fifth is outlined, the melodic line ascends back chromatically to its starting note – implying a palindromic design. Palindromic designs are often encountered in this paradigm.

Quartal chords and quartal-derived sonorities figure prominently in the *Ragtime* movement from Hindemith's *Suite 1922*. Many of these quartal sonorities are generated by three note segments of the cycle of fourths. However, there are also variations on this three-note pattern. Quartal chords often appear, with the middle note of the three-note segments omitted – revealing a minor seventh. Moreover, inversions of the three note quartal chords are used which appear as fourths joined with seconds. The "inversion" of these quartal chords are better thought of as anticipatory of the accretion intervals of Ligeti, since the concept of chordal inversion is associated with the concept of a chordal root. Ligeti's accretion intervals are generated when an interval is attached to the outside of a motivic interval. As a result of Hindemith's use of quartal chords and their derived sonorities, seconds, fourths, and sevenths become motivic intervals in this movement. In addition, there is often an overlap between consecutive quartal segments. The overlap involves one to two common tones.

In the first two measures, there is an alternation between minor sevenths and quartal chords. The sevenths are indeed alterations of the quartal chord pattern with the middle note omitted. As seen in example 3-12, these two measures feature an alternation between white piano key quartal chords and black piano key quartal chords that are a half step apart. The white key sonorities are a whole step apart from one another and share one common tone. The

black key sonorities are also a whole step apart, sharing one common tone. The pattern of whole step transposition results in a return to the original white key and black key sonorities of measure 1, beat 1.



Example 3-12: Hindemith *Suite 1922*, measures 1-2. Black and white key quartal chords. Omitted notes are in boxes.

On each beat of measures 1 and 2 is a transposition of set [01237]. The motivic intervals of this movement can be observed as this pitch class set cycles through an octave via transpositions of a major second and two transpositions of a fourth (see example 3-13).



Example 3-13: Hindemith Suite 1922, measures 1-2, set transpositions in normal order.

A series of interlocking quartal sonorities is embedded in measures 4-7 (example 3-14). These segments from the cycle of fourths move from the flat pitches, which are initially notated as sharps, to the natural pitches. However, this progression around the cycle of fourths, which is primarily carried in the right hand, is not linear. On beat two of measure 6, a larger quartal sonority, with an omitted note D-flat, is played with both hands. On the "and" of beat two in the same measure, a three note segment is played in both hands with the middle note doubled at an octave. Altogether, on the cycle of fourths, these segments occupy the space between A-sharp and A, a compound seventh and nearly a half turn on the cycle. Once the natural pitches are reached, there is a return to the flat pitches in conventional notation. In Table 3-1,

consecutive quartal strands, shown horizontally, are lined up with one another to show their overlap. An omitted D-flat is shown in parentheses. The F-sharp also appears as G-flat in this passage.



Example 3-14: Hindemith Suite 1922, measures 4-7.

Table 3-1: Hindemith *Suite 1922*, cycle of quartal sonorities/segments in measures 4-7. Omissions are in parenthesis.

D-sharp – G-sharp – C-sharp									
A-sharp – D-sharp – G-sharp									
	E-flat	- A-flat	-(D-flat)	-G-flat	-C-flat	t			
			C-sharp	- F-sharp/G-flat	-C-fla	t			
			C-sharp	- F-sharp	-B				
B-flat -	E-flat	- A-flat			-B	-E	-A		

In measures 17-22, a similar progression occurs with the quartal segments occupying the same space. In measures 9-12, a similar progression is interrupted by superimposition of whole tone zero upon whole tone one, manifesting as a series of motivic seconds amidst pedal tones and another occurrence of whole tone one in the left hand.

In measure 25, following an initial quartal segment consisting of {D-sharp, G-sharp, Csharp} in the previous measure, another more directed series of interlocking quartal segments ensues. It begins with notes {F, B-flat, E-flat} which is followed by a cycle. The cycle culminates with {D-sharp, G-sharp, C-sharp} in the right hand accompanied by dyad {F-sharp, B} in the left hand (see example 3-15). In the B section that follows in the next measure, segment {A, D, G} constitutes a complete revolution around the cycle of fourths with note C being omitted.



Example 3-15: Hindemith Suite 1922, cycle of quartal sonorities/segments.

In measures 30-32, there is an alternation between {A, D, G} and {G-sharp, C-sharp, Fsharp} which are a half step apart. This passage represents a moment of stasis, in the absence of directed movement around the cycle. A similar passage is found in measures 33-35, as {Csharp, F-sharp, B} alternates with its half step alteration, {C, F, B-flat}. In measures 32-33, there is a continuation of the previous revolution around the cycle beginning with {G, C, F} and ending with {B, E, A}. From segment {G, C, F} nearly a full revolution is made with note D being omitted. Since segment {F, B-flat, E-flat} in measure 25, there has been nearly two revolutions around the cycle of fourths. In contrast with previous progressions, measures 32-37 features inversions of the quartal chords or segments, resulting in intervals of a fourth joined with a second. In the example below the inverted note is in its original position designated by parenthesis. In measures 35-36, the progression around the cycle picks up with {B, E, A} from measure 33 and ends with {F, B-flat, E-flat} on the downbeat of measure 36, making two full revolutions from the starting point in measure 25. In overlap with the previous series, another progression begins with {D, G, C} after the "and" of beat one in measure 36 and ends with {A-flat, D-flat, G-flat} on beat one of measure 37.

Hindemith's "Ragtime" from *Suite 1922*, Gershwin's "Crap Game Fugue" from *Porgy and Bess*, and Milhaud's *Trois Rag Caprices* bear similarity with one another in their use of dual pedals, syncopation, and second dyads. In measures 9-12 of Hindemith's "Ragtime," the right hand's alternation between a single melodic line and quartal structures is interrupted by descending lines in both hands featuring WT0 and WT1. This texture in measures 11 and 12 is characterized by a series of second dyads as well as repeating notes A and C-natural, behaving like pedal tones (see example 3-16). This series of seconds and repeated notes bear similarity with the subject of Gershwin's "Crap Game Fugue" whose repetition of a F-sharp-G dyad competes with note D as potential pedal tones (example 3-17). In both the Hindemith and Gershwin examples, the melodic lines are compound, implying more than one melodic line. Moreover, the appearance of dyads indicates that these melodic lines are close in proximity. The close proximity of melodic lines anticipate the complex counterpoints of musical space. In addition, in both examples the syncopated lines deemphasize and avoid the strong beats, which is in keeping with the ragtime-jazz melodic style.



Example 3-16: Hindemith "Ragtime" from Suite 1922, measures 9-13.



Example 3-17: Gershwin "Crap Game Fugue" from *Porgy and Bess*, measures 1-3.A similar use of second dyads, pedal tones, and syncopation can also be found in Milhaud's *Trois Rag Caprices* (example 3-18).



Example 3-18: Milhaud Trois Rag Caprices, measures 1-4.

A right hand B pedal prolongs the subdominant B major chord amidst neighbor notes and collapsed extended chord formations. A closer look at the right hand shows four-note harmony parsimoniously collapsing, with each individual voice converging on one another. Clusters are created on beat three of measure one and beat two of measure 4, between notes B and D. The right hand eventually disintegrates completely via simple dyads of fourths, thirds, and seconds until it finally reaches a single note B on beat two of measure three. Here, the process of compound melody is reversed. Instead of individual voices emerging from a single melodic line, four part harmony melts back into a single melodic line. Once note B is reached, however, the process reverses as voices emerge and splinter off until by the second repetition of the melody, the right hand resumes its four-note harmony. Similar to the Hindemith stylistic allusion, the last beat of the measure is emphasized by accents and tied over to the next measure.

In these excerpts, the anticipation of zero form or musical space can be observed as the layering of pedal tones, compound melody, extended chords, and second dyads create converging melodic lines. As seen in passages such as the Milhaud example, the proliferation of seconds is a by-product of single voices merging into other melodic lines. These seconds, in turn, merged with other voices creating clusters. As stated earlier, the formation of clusters is the precursor for the onset of musical space. As seen here, jazz and post-tonal music of the twentieth century converge on the same path towards musical space.

In Tatum-Waller's "Jitterbug Waltz," the voicings for extended chord vocabulary provide opportunities for recurring intervallic patterns involving seconds, quartal constructions, tritones, and tone clusters. This also gives rise to sets with whole tone, tritone, and augmented intervals, all of which will be discussed in more depth later in this study.

Seconds embellish the chords of the very first measure, evoking tone clusters. In the first chord, an E-flat 11th, second dyads occur between F3 and G3 as well as E-flat4 and F4. A difference in octave placement prevents a continuous cluster between E-flat and G – the first three scale degrees of the tonic scale. In the next chord, a B-flat 13th chord (or added 6th) with a raised 11th; notes {C, D, and E-natural} form a white key cluster outlining a major third. Moreover, the importance of consecutive seconds in the intervallic content of these chords is discerned by the INF of these chords which are (2235) and (22314). Intervals of a fourth are also apart of the intervallic content. Fourths in combination with the other aspects of the harmonic vocabulary, tie these opening chords to other sonorities in both this piece and other works within this paradigm. The opening chords, which are sets [0247] and [01468] are both voice leading offsets of the whole tone collection.

During the A-flat 9 in measures 7-9, there is a harmonic and melodic emphasis on the tritone between the third and the seventh, C and G-flat. On beat three of measure 7, there are double seconds, F and G-flat as well as B-flat and C, forming a near-clustered sonority (example 3-19). Notwithstanding the tritone created by the lowered G, these notes can be arranged as a series of fourths: {G-flat, C, F, B-flat}. This sonority thereby demonstrates how quartal sonorities can also manifest as near-clustered and clustered formations. A similar sonority appears in measure 10 in the Fm7 lowered 5th harmony, with {A, B-natural, E-flat, F}. These notes comprise the inversion of set [0157], which is another voice leading offset of the whole tone collection. These notes can also be arranged as a series of fourths: {F, B-natural, E-flat, A-natural}. Moreover, a more complete cluster follows on the next beat with three consecutive notes, {A-flat, B-flat, C-flat, and D}. The notes of this sonority fills in the gaps left by the previous one. The two chords together form a harmonic manifestation of the gap-fill technique.



Example 3-19: Tatum-Waller "Jitterbug Waltz," measures 7-10.

In measure 15, there is a G minor 11th chord featured in the left hand with a quartal voicing consisting of the seventh, third and eleventh. Moreover, a second dyad has resulted from the doubling of the eleventh. In the next measure, the voicing for the C13th with a raised 11th is also quartal, adhering to the 7-3-6 jazz comping pattern for dominant extended chords.

The continuation phrases found in measures 19-30, are harmonized by thirds, fourths, and a tritone – the intervals that motivic to this piece. Moreover, seconds and tritones continue

to be emphasized in the voicings of the left hand accompaniment. In measure 32, an altered quartal voicing, adhering to the 7-3-6 pattern, articulates F 13th harmony (see example 3-20). In the measures that follow, seconds, fourths, and tritones are emphasized in the left hand voicings of the B-flat 7th chord.



Example 3-20: Tatum-Waller "Jitterbug Waltz," measures 15, 18, 31-34.

In measure 39, there is a complete cluster of notes covering the space of the tritone between G-flat and C (example 3-21). The tone cluster nearly evolves before our eyes beginning as open intervals of an A-flat dominant 9th chord to an inversion and then to the complete cluster. The idea of clusters evolving from open intervallic motives continues in measure 51. It is during the repetition of the continuation phrase that a G is added to the chordal voicing. This nearly closes the interval between E-flat and A-natural in the left hand. The missing note, F, is found in the bass.



Example 3-21: Tatum-Waller "Jitterbug Waltz," measures 39 and 51.

In the "Summer Dreams" movement from Bolcom's Second Violin Sonata, Bolcom experiments with the blues sound by manipulating it and turning it on its head. This manipulation of the blues sound occurs concurrently with the variation of intervallic motives. In this movement, Bolcom demonstrates that the approach, as well as, the melodic intervallic outline is key to discerning the character of the blues. A comparison can be made between the piano accompaniment and the accompaniment found in Davis' "All Blues." In Davis' "All Blues" there is a parallel third harmonization of a standard blues accompanimental pattern. In Bolcom, parallel thirds become parallel sixths while the flattened seventh is raised. In spite of his raising of the seventh, the piano accompaniment retains its blues flavor. This can possibly be attributed to the rhythm and the outline of a minor third in the topmost line.

The primary locus of conflict in "Summer Dreams" surrounds the lowered seventh of the traditional blues scale. A withheld seventh, E-flat, arrives in the third measure, in both the accompaniment and the violin part. From that point on, there is a back and forth between E-flat and E-natural. The newly arrived E-flat in measure 3 is held through the return of the tonic pedal in the next measure. Interestingly, the expression marking is restrained and it is played at a low dynamic level. The entrance of C-sharp signals a decisive departure from the blues sound in the violin part. However, in spite of this departure, the ensuing measures up to measure 8, reveal the violin playing largely a series of sevenths, diminished sevenths, and ninths (example 3-22). This series of sevenths do nothing but conflict with the piano's modified blues ostinato. This conflict is ironic considering how the minor seventh is one of the hallmarks of the blues sound. The first interval in the violin part, E-flat 4 - C-sharp 5,¹⁷ is a minor seventh written as an augmented 6th. The next interval C-sharp 5 to B-natural 5 is a minor seventh. The next notated-seventh, from B5 to A-flat 6, is a major 6th written as a diminished seventh. Although A-flat is a part of the F blues scale and reappears in the final section of the piece in all of its bluesy glory, its appearance here is of no effect because of what came before as well

¹⁷ This notation indicates octave placement.

as how it is approached. Moreover, the note A-flat clashes with the A-natural in the piano part. In essence, the series of sevenths create an independent sound space that defies the piano's tonally-centric pattern. An interval of a ninth, A-flat down to G in measure 6, is the only exception in this series of sevenths and notated sevenths. From G to F-sharp is the lone major seventh. The F-sharp is a lowered ninth in the key and a raised fifth of the subdominant chord.

In measure 19, the notes {E-flat, F-sharp,G}, compressed into the same register and placed in a different context, would be a bluesy lick. Again, Bolcom misreads or alters the blues sound. However, it retains its syncopation, accent, and repetition. From measures 20-22 sevenths predominate with the exception of the minor sixth, G and E- flat. The appearance of the E-flat, a bluesy lowered seventh, gets lost in the surrounding dissonance.

This independent sound space created by the violin line has an identity that is registral in nature as well as pitch oriented. The fact that the violin line consists almost entirely of intevallic leaps is highly evocative of Varese's *Density 21.5*. In Jonathan Bernard's analysis, the intervallic space expands and contracts with the introduction of notes from registral extremes. A similar phenomenon can be observed in the violin line whose initial intervallic space of 10 semitones, between notes E-flat 4 and C-sharp 5, has expanded over two octaves with the arrival at A-flat 6 by measure 6. In measures 10-11, the intervallic space is now expanded into three octaves with the notes {C-sharp 4, E5, E-flat 6, and C-sharp 7}.



Example 3-22: Bolcom "Summer Dreams," violin line, section 1.

In measures 20-22, the intervallic space shifts to the lower register as three harmonic dyads are introduced into the violin line: m7, m6, and M7. The first section of this movement closes with the violin line languishing over the major seventh interval.

In the second section, there is a shift in focus to harmonic dyads. In the opening measures, the violin features a seeming tone row of intervals. As this section ensues, the violin departs from such predictable patterns while "row-like" patterns of intervals and sonorities appear in the piano part. For the remainder of the section, the instruments indulge in a psuedo-imitative exchange while largely maintaining sixteenth note rhythms. In contrast to the previous section, both instruments have forsaken any sense of tonic or centricity. The blues style has momentarily been abandoned for the post-tonal style. Measures 23-26 of the violin part feature a series of intervals consisting largely of sevenths, tritones, and thirds cast in sixteenth-note rhythms (example 3-23). In measures 23-24, a palindrome is created with the following intervals: $7^{th} - TT - 3^{rd} - TT - 7^{th}$.



Example 3-23: Bolcom "Summer Dreams," violin line, measures 23-26.

In measures 27-29, as the violin is silent, the piano begins its own row of trichords and dyads in both hands (example 3-24). With the exception of the tritone found in measure 29, the trichords and dyads outline the motivic intervallic spaces of sixths/diminished sevenths, sevenths, and ninths. A palindromic pattern emerges between measures 27-28. At first glance, it appears that the pattern is broken on the fourth beat of measure 28. However, intervallically the pattern is maintained as the palindrome ends with the intervallic spans of a seventh and a

ninth in the left and right hands, respectively. An application of Jonathan Bernard's trichordal analysis, which was originally formulated for the analysis of Varese's sound mass structures, reveals a deeper relationship between measure 27, beat one, and measure 28, beat four. Bernard's analysis which measures the intervallic space and its bisection in semitones, would quantify the trichords of the left and right hands on beat one of measure 27 as [9][2] and [8][5], respectively. The trichords on beat four of measure 28 are read as [2][9] and [4][9]. Not only are the intervallic spaces maintained, the intervallic structure of the seventh has been inverted in measure 28. Such an inversion of trichords is a common occurrence in the music of Varese.¹⁸ Another palindrome seemingly ensues as measure 29 repeats the trichords from the last beat of the previous measure. However, this pattern is quickly broken by beat two. An abbreviated version of this palindrome is found in measures 38-39.



Example 3-24: Bolcom "Summer Dreams," piano part measures 27-29 and 34-36.

Another palindrome consisting entirely of trichords is found in measures 34-36 (see example 3-24). In measure 36, it appears that a second repetition is underway. However, on the final beat of the measure, the pattern ceases. In this passage, the trichords occupied an expanded intervallic space of compound fourths. An application of Bernard's trichordal analysis yields the following reading:

[6][11] [7][10] [11][7][8][3]

¹⁸ Jonathan W. Bernard, "Pitch/Register in the Music of Edgard Varese," *Music Theory Spectrum*, Vol. 3 (Spring 1981), 14.

In this passage, the seventh plays an important role in the bisection of the intervallic space. Of particular motivic significance is the 11 semitone span of the major seventh. As the intervallic space expands on beat two of measure 35, there is the addition of a second trichord that comprises 11 semitones.

Sonorities resembling "Ligeti signals," which is a fourth bisected into a second and third or vice versa, are encountered in the remainder of this second section. As seen in Table 3-2, measure 40, which emphasizes the tritone as an intervallic motive, can yield the following reading with Bernard's analytical method:¹⁹

Table 3-2: Bernard's trichordal analysis applied to Bolcom "Summer Dreams," measure 40.

Right hand	[8]	[4][2]	[6]	[2][3]	
Left hand	[4]	[4]	[4][2]	[4]	

In addition, this passage includes instances of exact repetition of an individual dyad and a trichord. There is another sonority that resembles the "Ligeti signal" to be found in the right hand at the beginning of measure 62.

In this second section of "Summer Dreams" the ninth along with the seventh, fourth, and tritone has emerged in motivic significance. Notwithstanding exact repetition of a series of intervals, the bisection of the ninth's intervallic space has for the most part not been subjected to repetition or made motivic in its own right. There is one exception, however, in measure 41, as the violin features a trichord whose structure is an inversion of one encountered in the piano's right hand in measure 28.

¹⁹ Although the bracket notation is used primarily for the description of trichords, on occasion it is used in the discussion of individual dyads. Again, these sonoric structures are calibrated in semitones.

The piano's blues ostinato returns in measure 63. In measure 69, the complete blues sound is ushered in by the violin's D and A-flat tritone, along with the minor third emphasis in the topmost line (example 3-25). Moreover, there is increased syncopation, serving as an additional contrast to the middle section. There is also a repetition of gestures that is indicative of the blues language. The violin line consists primarily of fourths, tritones, fifths, and sixths.



Example 3-25: Bolcom "Summer Dreams," measures 69-72.

Harmonic Convergences: Altered Chords, Referential Collections, and Pitch class sets

The works in this study reveal that the scales and altered chord harmonies of jazz converge with the referential collections, pitch class sets, and even the twelve-tone technique of post-tonality. There is no wonder, given the operation of the chord-scale compatibility principle in operation within jazz.²⁰ Moreover, many of the pitch materials of jazz are identical with the referential collections of post-tonality. Octatonic scales are called diminished scales in jazz. The acoustic collection is called the diminished whole tone scale. In fact, the acoustic zero scale is known as the Lydian dominant scale – a mixolydian mode with raised fourth degree. Dmitri Tymoczko states the following regarding the use of the whole tone scale in jazz:

Musciological evidence indicates that the whole-tone scale was the first to enter jazz, having most likely been borrowed from the impressionists via Duke Ellington. (Ellington plays whole-tone scales in "Ko-Ko" and "Sepia Panorama," both recorded in 1940. Several commentators speculate that Thelonious Monk, who popularized the scale, borrowed the scale from Ellington.)...²¹

Not only did borrowing of these referential collections exist, "the peculiar sound of bop and post-bop jazz ... is in large part a function of the use of whole tone, octatonic, and overtone scales to represent dominant harmonies."²² Moreover, the blues scales as well as the major and minor pentatonic scales of jazz interact freely with other referential collections. Tymoczko asserts that jazz and post-tonal musicians have worked with the same material for a very long time and together have contributed to the evolution of an expanded tonality:

One might conclude that the 'common practice period' did not necessarily end with the nineteenth century...coupled with the rules of 'chord-scale compatibility'... represent a substantial addition to the tonal system which is not the creation of any single musician. Though the expanded system is theoretically elegant, it evolved over a number of years, in the hands of a number of figures – Debussy, Ravel, Stravinsky, Bartok, Messiaen, Thelonious Monk, Charlie Parker, John Coltrane. All of these have explored various of the seven non-chromatic scales, like mountaineers climbing the same mountain from different sides, often unaware of the others' progress. In recent decades, their explorations have crystallized in the vocabulary of the working jazz musician. To this

²⁰ Dmitri Tymoczko, "The Consecutive-Semitone Constraint on Scalar Structure: A Link between Impressionism and Jazz," *Integral*, Vol. 11 (1997): 146.

[&]quot;Jazz players often describe the rules associating scales and chords as the principles of "chord-scale compatibility." Underlying these rules is the basic tenet that scales can be used to express the function of chords that they contain as subsets. Thus an improviser can build a melody using the pitches of the whole tone scale that begins on the root of any dominant seventh chord with a lowered fifth, since that chord is subset of the whole tone scale."

²¹ Tymoczko, 150.

²² Tymoczko, 148-9.

extent, at least, we do have a genuinely 'common practice.' And to this extent, tonality is not a relic of previous times, but rather something that continues to change and grow.²³

Within the post-tonal camp, Schoenberg and others have long acknowledged the connection

between chord alterations and the atonality that sparked the post-tonal movement.

In his *Harmonielehre* (1910-11), Schoenberg discusses two processes that create what are now recognized as incipient atonal pitch class sets. The first of these is the *vagierende Akkord* (indeterminate chord) that, for Schoenberg, is a chord which comes into being by chromatic alteration and which, as a result, has multiple meanings. Or it may be a chord of diatonic structure that takes on a new meaning in a particular context.²⁴

Moreover, chromatic alteration, along with the extension of chords, leads to the formation of referential collections as well as pitch class sets. When ninth, eleventh, and thirteenth chords are arranged canonically within an octave, connections with referential collections begin to emerge. For example, altered and extended dominants result in whole tone and octatonic vocabularies. The jazz nomenclature or labeling works well with post-tonal analytical tools as a marker of both function and style.

During the course of this study, the commonalities of chromatic alteration and chord extension emerge. Chords begin appearing with both major and minor thirds; major and minor sevenths; competing ninths; and perfect fifths coexisting with raised or lowered fifths. The use of quartal chords, trichords, clusters, and near clusters are prevalent both in the jazz and posttonal works studied. Individual sonorities have become prevalent across the paradigm.

For example, the minor raised seventh chord – an embedded set in the hexatonic collection – is prevalent. It is found in numerous works including Powell, Ives, and Loussier's

²³ Tymoczko, 173.

²⁴ Allen Forte "Schoenberg's Creative Evolution: The Path to Atonality," *The Musical Quarterly*, Vol. 64, No. 2 (April 1978): 148

recomposition of Bach's Toccata and Fugue in D minor. As seen in Powell's "Tempus Fugit," the D minor raised seventh chord is closely related to the B diminished seventh chord. In fact, Powell is known for his diminished chords with major sevenths.²⁵ Although diminished seventh chords are not in themselves atonal structures, Schoenberg asserts that their use in "nontypical environments" leads to atonal harmonies.²⁶ Moreover, in "Tempus Fugit," this sonority is used interchangeably with the D minor raised seventh chord with a lowered fifth (octatonic subset) and the D7 with a lowered fifth, set [0246]. In *Harmonielehre*, Schoenberg discusses the derivation of this sonority {D, F-sharp, A-flat, C}: " ... [It] is best derived from the second degree in major or minor by raising the third and lowering the fifth. By raising the third one obtains an ascending leading tone; by lowering the fifth one obtains a descending leading tone." ²⁷ The connection between these Powell sonorities and the Schoenberg explanation of their derivation is truly illustrative of two groups of mountaineers scaling the same mountain.

In the course of this study, additional commonalities emerge that shed light on the relationship between altered chords and pitch organizations. In the Bartok, Ives, and Bolcom examples, altered chords, referential collections, and pitch class sets interact with tonal progression. Pedal tones are used widely across the paradigm such as in the Davis and Bolcom examples. In Stravinsky, chord alterations are a natural outgrowth of contrapuntal processes. In the Gershwin fugal example, there are passages that solidify the connection between bitonal structures and altered chords. Lastly, in Berg's *Lulu* and both of Gershwin's examples, altered chords anticipate the latter stages of the post-tonal movement. In Berg's example, quartal

²⁵ Tymoczko, 153. "The descending chords at measure 8 [of Powell's solo on "Collard Greens and Black-Eyed Peas"] is made up of consecutive diminished triads with major sevenths, are a common jazz trope, clearly derived from the octatonic scale."

²⁶ "The second chord in Example 11 (d-diminished) is not an atonal harmony. However, its occurrence here in a nontypical environment is illustrative of a process that does, in fact, lead to atonal harmonies." Forte, "Schoenberg's Creative Evolution," 148.

²⁷ Forte, 148.

chords, trichords, and jazz harmonies are derived from and interact with the principle row. Meanwhile, in the Gershwin's "Blue, Blue, Blue" pentatonic scales create a twelve tone aggregate. At the close of Gershwin's "Crap Game Fugue," trichord structures that resemble "Ligeti" signals abound in the texture.

Let us begin with Davis' "Israel." Here, altered chords evoke referential collections which interact and converge. Although much of the language is representative of the octatonic and the blues/pentatonic collections, the hexatonic and acoustic collections appear as well. The integration of the pentatonic collection with other referential collections recalls the Gershwin example in which the pentatonic scale formulates a twelve-tone aggregate as well as interacting with subsets of the hexatonic and whole tone collections.

The bulk of the introduction to Davis' "Israel," occurs over a C pedal. The emphasis on the F in the melody and in the bass in measure 2, along with the presence B-flat and D, suggests a C dominant 11th chord. Like the coming main theme, the melodic figures are essentially embellishments of extended chord arpeggiations. The opening figure played in unison by the trumpet and alto sax, is answered by the rest of the ensemble with a syncopated figure that outlines the underlining harmony. The ensemble response is answered in turn by the alto and baritone saxes' unison arpeggiations of a G major 7th chord with a raised fifth. This sonority considered in the context of the prolonged pedal harmony is better read as part of the C dominant with both a raised 9th and 11th, thereby evoking an octatonic zero sound with a major-minor third and B-natural as an outlier. This harmony is also closely related to the acoustic collection. In measures 5-8, the alto sax returns to a series of reiterations of the tail motive from the opening gesture {C, B-flat, G, F}. These notes, which will later prove to be of motivic significance, constitute the set [0257], a segment of the cycle of fourths and an embedded set in the C minor pentatonic scale. Combined with the piano's C minor 9th harmony, in measure 5, set [024579] is produced which will be encountered again as well as its subsets (example 3-26). The alto's repetitive gestures are answered by the baritone sax and trombone playing what initially is a descending bebop scale on C. This descending bebop scale, however, ends instead with the same notes as the alto sax, thus highlighting set [0257]. With the entrance of a G pedal in the piano part in measure 7, a G7 lowered 5th harmony, an integral part of later progressions, comes into play. However, the C from the previous chord continues to linger. Therefore, in place of a whole tone subset, notes {C, D-flat, F, G} articulate set [0157], denoting fourths and a tritone. Set [0157] is also a voice leading offset of the melody's [0257].



Example 3-26: Davis "Israel," measures 3-8.

At the onset of the "head" in measure 9, the first four notes as found in the alto, baritone, and trumpet lines is set [0257] (see example 3-27). The other sets generated by the melodic line are as follows: [02357], [024579], and [0247]. As indicated by the prime forms, set [0257] is embedded in the first two sets. The prime forms also reveal a pentatonic tetrachord [0247] as an embedded set and as a gesture. Meanwhile in measures 9-12, the accompaniment alternates between Cm7/CM7 and an altered G7. The piano plays an inversion of set [02479] for the first C minor harmony, recalling the motivic set [0257] and cluster {D, E-flat, F}. The notes also fit into octatonic one, with F as an outlier. Moreover, this collection is also a voice leading offset of the C pentatonic scale.



Example 3-27: Miles Davis "Israel," measures 9-20.

The G7 lowered 5th harmony that follows in the piano part is realized by notes {G, B, D-flat, F}, the WT and OCT 1 subset [0268]. The CM7 harmony in measure 10, which includes both a Stravinskian major-minor third²⁸ as well as a raised ninth, consists of notes {C, G, E, B, D-sharp, F-sharp}. This creates set [013478] whose inversion is embedded in OCT 0 with B as an outlier. It is also a voice leading offset of the hexatonic set. The G7 in measure 11, which shares four common tones with the previous chord and includes a major and minor seventh as well as a sixth, is realized with set [01248] which is related to the hexatonic collection. Set [024579] which has the C pentatonic scale embedded, is the realization of the C minor chord found in measure 11.

The alto, baritone, and trumpet lines in measures 17-20, outline the sets [024579] and [01245] (see example 3-27). The first set is derived from a series of fourths modified by octave displacement: {C, F, B-flat, E-flat, A-flat, D-flat}. Moreover, it is played over a D-flat added 6th harmony over a G root and followed by a G7 chord. This harmony is realized by set [02457], housing the motivic set [0257]. The two measures together can be considered a prolongation of G7 harmony. Thus this G7 realization includes a both a lowered 5th/perfect 5th;

²⁸ "In other words, I quite often find it advantageous to regard (or hear) cases of 'major-minor third' emphasis – or …'clash,' perhaps the most persistently pursued of all 'impurities,' certainly the most frequently cited – as octatonically inspired, as a species of octatonic-diatonic interpenetration, so that, apropos the C scale on D reference at Nos. 112-118 in the second movement of the *Symphony in Three Movements*…" Pieter C. van den Toorn "Some Characteristics of Stravinsky's Diatonic Music," *Perspectives of New Music*, Vol. 14, No. 1 (Autumn-Winter 1975): 124.

both a sharp 9th/flattened 9th; and a major-minor 3rd. The D-flat added 6th/G placed with the G7 together yields set [0124679]. Four notes from the C minor pentatonic scale {E-flat, F, G, and B-flat} are embedded. The blues collection or set [012479] is embedded as well. This sevennote set is also embedded in the OCT 1 collection with E-flat as an outlier. In addition, this set is embedded in the AC -5 collection with D as an outlier.²⁹ In the final G7 chord before the repeat of the head progression, found in measure 20, four notes of the pentatonic scale are embedded: {E-flat, F, G, and B-flat}. This G7 has a major-minor third, a major-minor seventh, and a raised fifth– comprising set [014568]. This set is embedded in HEX 2 with F as an outlier.

Beginning in measure 112 in Bartok's *Contrasts*, the violin and clarinet indulge in continuous imitative exchange with sets [0134] and [013], which are OCT 1 subsets (see example 3-28). Over an F pedal, the piano accompaniment consists of inversions of the G minor 7th chord, set [0358] and the G minor lowered 9th chord, set [02358]. The addition of the A-flat to the latter set brings out the importance of the B-flat dominant 7th chord that is embedded. Note B-flat will later acquire prominence as a pitch center. Taken together, the notes of the instruments and the piano accompaniment are comprised of the set [023568], which is a subset of the OCT 1 and AC -2 collections. The latter wins out as the primary collection with the arrival of C-natural in the violin part in measures 111-112.³⁰ As a new section ensues over a continuing F pedal in measures 112-118, the accompanimental harmony consists of an abbreviated Fm7, set [025]; an inverted B-flat suspended chord, set [0247]; and the occasional B-flat with lowered 5th chord, set [0137]. The B-flat suspended chord could

²⁹ The term AC-5 stands for the version of the acoustic collection that has the following flats: B-flat, E-flat, A-flat, D-flat, and C-flat. The term outlier refers to a note or notes that appears in the sonority although it is not a member of the collection. The outlier in post-tonal theory can be likened to a non-harmonic tone in traditional theory.

³⁰ The AC-2 collection consists of the following: C D E F G A-flat B-flat C.

also be read as an incomplete A-flat ninth chord. In the measures that follow, the true tonal center is called into question as A-flat and B-flat compete with the F as pedal tones. This competition is redolent of Bolcom's "Premonitions" from the *Twelve Etudes*, which also has an A-flat and B-flat competing as pedal tones and tonal centers.



Example 3-28: Bartok Contrasts measures 104-119.

The first two sets found in this piano accompaniment, however, combined comprises the B-flat major pentatonic scale {B-flat, C, D, F, A-flat, B-flat} or set [02479]. The notes of the latter set, [0137], with its E-natural is a lingering reminder of the AC-2 collection. Meanwhile, the clarinet and the violin indulge in a near canonic sequence. At the midway point, the violin breaks the pattern while still maintaining the same contour. On the ascent both instruments have a collection of pitches that could be labeled two ways. Favoring the A-natural as the central pitch and treating note A-flat as an outlier, the collection could be labeled as A-Phrygian. This reading is consistent with a coming modal passage. On the other hand, note Anatural can be treated as an outlier, this collection could be interpreted as an occurrence of AC -2. This reading is consistent with the previous passage. Perhaps being located in a musical crossroads, this scalar material can be interpreted as representative of both collections at once. On the descent, an E-flat appears in measure 117, which places the material after it solidly within a key signature of three flats (example 3-29).



Example 3-29: Piano accompaniment from Bartok Contrasts, measures 112-117.

By this time, additional clues have been provided as to the identity of the true tonal center. In measures 113-114, note B-flat is sustained in the violin, the highest voice. Moreover, each time set [0137], the B-flat chord lowered 5th chord appears, note A-flat is strangely absent. Nevertheless, the battle continues to rage, in measures 118-121, with the cascade of set [0246] whole tone one subset gestures that end with A-flats. The notes of this set {A-flat, B-flat, C, and D- natural} are also embedded in the AC -2 collection.

In measure 121, the piano picks up the same gesture, which is in turn answered in the violin. The violin answers with the same gesture transposed down a compound second while remaining within the confines of the AC -2 collection. In turn, the piano transposes the gesture down a compound tritone thereby casting it in the colors of WT 1. This sparks a new imitative exchange between the violin and the clarinet involving [01346] pentachords that are subsets of both AC –1 and OCT 2. The contrapuntal exchange ensues via sixteenth note figures in alternation while moving in contrary motion. The two forms of the set are a whole step apart. The clarinet has notes {E-flat, D, C, B-flat, A} while the violin has notes {B, C, D, E-flat, F}. Both figures outline a tritone. The close affiliation between the octatonic set and AC-1 is also

evident in the INF (12126).³¹ The last interval of a tritone could be separated into whole steps yielding (1212222) – a rotation of the acoustic collection.

Meanwhile, the piano answers in measures 126-127 with a gesture taken from OCT 1 – with F-sharp/G-flat as an outlier (see example 3-30). This is a foreshadowing of the coming section in which note F-sharp will acquire significance. In the next measure, the piano finally acknowledges the presence of the [01346] pentachord in imitation. In the penultimate measure of the section, WT 1 returns from measures 122-123. Just as F-sharp was an outlier from the piano's last octatonic gesture, now F-natural is an outlier in the texture. The F-natural is followed by B-flat, the rightful tonic pitch, in the next measure. Curiously, given its previous struggle with A-flat, note B-flat had asserted itself earlier in measure 127, where it was an outlier. This also happens in measure 131 as well. In both instances, the B-flat rings with open octaves. Note B-flat is an outlier to both OCT 2 and AC -1.



Example 3-30: Bartok Contrasts, measures 124-126.

The employment of the harmonic vocabularies of bebop results in the extensive use of the octatonic, whole tone, acoustic, and hexatonic collections in Powell's "Tempus Fugit." The interaction between the first three collections is best observed in the ongoing transformation of the tonic sonority. In fact, there is an association of the tonic D minor altered harmony with each of the three collections, which is illustrative of a blurring of the boundaries between them.

³¹ INF stands for interval norm form. Interval normal form shows the intervallic profile of all sets belonging to a given prime form. A comparison of interval normal forms often reveals intervallic relationships between different prime forms.

An examination of the variants of the tonic sonority in this piece also sheds light upon the other harmonies encountered throughout. Much of the work is relatively simple. Excluding the non-functional, largely stepwise progressions labeled as interludes, most of the progressions center around a Gm-A7-Dm pattern. It is the manipulations of these three chords that accounts for the emergence of referential collections in this work.

In a sense, the tonic sonority is a parent chord which has a relationship with all other major sonority types prevalent in this piece. The final chord of this piece, found in measure 176, is the most instructive of the true essence of the tonic sonority. It is a Dm6 (maj7) chord which is the equivalent of a B fully-diminished seventh chord with a major 9th. Its notes {B, C-sharp, D, F, A-flat}, set [01369], are embedded in the OCT 1 collection or in what is known in jazz nomenclature as the diminished scale.

The opening gesture of "Tempus Fugit", which is also related to the tonic sonority found in the last measure, is a subset of the AC -1 collection. It is an arpeggiation of a D minor 9th chord with a major 7th, set [01348] (see examples 3-31 and 3-32). As stated earlier, this sonority is prevalent across the paradigm. The note C-sharp should be read as a chord member and not a lower chromatic neighbor as indicated by the subsequent entrances of the tonic harmony as well as the final chord of the song. The opening gesture also shares a ninth with the dominant versions of the tonic harmony.



Example 3-31: Powell "Tempus Fugit," measures 1-4.



Example 3-32: Powell "Tempus Fugit," melodic sketch of measures 1 and 8-9.

However, unlike some subsequent tonic chords this opening gesture and its transposition {Fsharp, G, B-flat, D}, which is a subset of AC 0 found in measures 8-9, do not have the lowered fifth. In both cases, the fifth of the chord is an outlier to the octatonic set that it would belong to otherwise. This form of the tonic sonority which includes a major ninth and an unaltered fifth is found melodically elsewhere in the following measures: 14, 22, 38, 48, and 56.

The harmonies of measures 3-7 establish the presence of both the octatonic and whole tone collections in this piece (see example 3-33). The E minor with a lowered 5th is essentially a half diminished chord, set [0258]. However, it is subjected to chromatic embellishment. Treating the notes {E, G, A-flat, B-flat} as harmonic, this sonority is played as an E7 with a raised ninth. This yields an inversion of set [0236] a subset of the tonic sonority [02368] found in measure 7. The next chord, an A7 with a lowered 5th and a lowered 9th, [02368], is a voiceleading offset of the whole tone collection and a semitone transposition of the same coming tonic sonority. In measure 4 Dm6 or [0258] is a subset of the octatonic collection. An A7 with a lowered 5th or [0258] in the next measure is an inversion of the previous tonic sonority. This form of the dominant 7th chord is of particular interest. Although the chord symbol has it labeled as a dominant 7th with a lowered 5th, both an E-natural and E-flat are present. This treatment is consistent with other appearances of the dominant 7th with a lowered 5th that are also found in measures 15, 39, 49, 93, 106, 169, and 173. A reading of both fifths as harmonic, since both are treated with equal weight in these passages, yields set [02368], a voice-leading offset of the whole tone collection. The tonic sonority, D7 with a lowered 5th or set [02368], arrives in measure 7.³² This opening progression provides a taste of the primary motivic sonorities at work in this piece. Moreover, in two irregular solo choruses to come, Powell dwells exclusively on two of those harmonies – Dm6 (alternately a D7 with a lowered 5th) and

³² These are the chord symbols provided in the score. The set identifications are my own.

A7 with a lowered 5th. The close association of the tonic sonority and its dominant seventh is best seen in measure 42, as the interpretation of a D9 lowered 5th and an A-flat 9th chord, a dominant substitute, both yield transpositions of the whole tone subset [0246].



Example 3-33: Powell, "Tempus Fugue It," measures 3-7.

The alterations of the G minor chord yield instances of the hexatonic collection. Its relationship with the tonic sonority is established in measures 8-9, appearing as a transposition of the opening minor raised 7th arpeggiation. It differentiates itself from the acoustic form of the tonic sonority with the absence of a major ninth. What appears instead during its arpeggiation is both a F-sharp and F-natural as well as both a B-flat and a B-natural. This alteration of the Gm7 chord appears throughout, in the following measures: 8, 13, 21, 37, 167, and 171. Such alterations transforms this chord from a Gm7 to a G major chord with both a major and minor 7th as well as a raised ninth. In measure 8, notes {F-sharp, G, B-flat, B and D} comprise the set [01458], an embedded set in the HEX 0 collection.

The instances of Dm6 (maj7) in measures 27 and 161, are a little curious with the presence of both the major 7th in the right hand chord and a C-natural in the bass line. In other works within this paradigm, competing fifths, sevenths, and ninths are common place. In this piece one or the other can be regarded as a non-harmonic tone. Treating the C-natural as a passing tone, the notes {A, B, C-sharp, D, F} comprises the set [02458]. The prime form identifies this chord as a voice-leading offset of the WT 1 collection with the root D as an outlier. Excluding C-sharp, this tonic sonority, which features the B half-diminished seventh
chord, is a subset of the OCT 2 collection. Both readings are valid and hold equal weight in the context of this piece. This sonority is illustrative of how the boundaries between the octatonic and whole tone collections have been blurred in this piece. In measures 101-102 both sevenths are sounded melodically during the appearance the tonic sonority.

Other manifestations of the tonic sonority are the D9 lowered 5th and the D7 lowered 5th. The former, found in measures 31, 42 and 165, yields subsets of the whole tone collection, [0246] and [02468]. The D7 lowered 5th in measure 7 yields set [02368], a voice leading offset of the WT 0 subset. This offset is the result of both A-natural and the lowered 5th, A-flat, being present. Below in example 3-34, a comparison is made between the four variants of the tonic sonority. The differences are generated by alterations such as: raising/lowering the fifth, the addition of a sixth, raising/lowering the seventh, and the juxtaposition of altered notes with the original chord member.



Example 3-34: Powell "Tempus Fugit" (tonic sonorities).

Our study of the Ravel Concerto in G begins at rehearsal number 4 where a new thematic section is introduced after a modulation to B minor. Here, the texture reduces down to the piano alone. Right away, a stylistic and harmonic change is discerned as well as the onset of a new theme. This passage of piano solo has a distinctly Latin flavor. Syncopation is created in the right hand by a triplet figure tied across the bar line. As seen in example 3-35, the left hand's arpeggiation is repetitive and dance-like with dyads on the weaker beats.



Example 3-35: Ravel Concerto in G, first movement, rehearsal number four. The centricity is around the dominant, F-sharp. There is a F-sharp pedal tone found in every measure in left hand gestures. However, the presence of both A-sharps and A-naturals belie any notion of F-sharp minor or F-sharp Phrygian. There are no other pitches besides A- sharp, Csharp and the tonic that support a reading in F-sharp major. A bitonal reading of F- sharp Phrygian against F-sharp major could be substantiated although the right and left hands do not sound as opposing tonalities. Also, the conflict between the A-natural and A-sharp, is related to Tymoczko's major-minor third. From the perspective of extended chord tonality, these measures are the prolongation of F-sharp extended chord harmony which includes a raised ninth. With a prime form, [0134579] that indicates a voice-leading offset from the Petrushka chord, there are definite affinities with the octatonic collection although outliers, such as Gnatural and B-natural, prevent a definitive choice between OCT 0 and OCT 2. These collection of notes could be characterized as an instance of AC + 1, with A-sharp as an outlier. If, on the other hand, A-natural is treated as an outlier, the notes of this passage are consistent with a Spanish scale built on F-sharp; F-sharp, G-natural, A-sharp, B-natural, C-sharp, D-natural, E-

natural, and F-sharp}. The clash of the A-natural and A-sharp in the fourth measure after rehearsal number 4 has the effect of a blues inflection. As seen in Table 3-3, there are two versions of the blues collection on F-sharp:

Table 3-3: Two versions of the F-sharp blues collection.

F-sharp	А	В	С	C-sharp	Е	F-sharp
F-sharp G-sharp	A A-sharp	В	С	C-sharp D-sharp	E	F-sharp

The A and A-sharp along with the other notes of the passage suggest a blending of both versions of the blues scale. This blending of pitch collections in this passage is representative of Ravel's revision of both melodic and harmonic materials. This passage illustrates the close relationship between the scales of jazz and post-tonal materials.

Tatum-Waller's "Jitterbug Waltz" consists of the repetition of two alternating sections, which with every repetition is varied melodically and harmonically. The best examples of interaction between altered chords and referential collections occur during the endings, extensions, and connections of phrases. On the second repetition of the B section, which tonicizes the supertonic (fm/FM), there is such an interaction as the harmony is varied and extended. In the alteration of these chords, there is interaction with the octatonic set, the major bebop scale,³³ and the blues scale. In measures 55-58, a half cadence is approached with the following chords: A-flat m6, B-flat 9th with an added sixth, and C7 with a raised ninth as well as an added sixth (as shown in Table 3-4 and Example 3-36 below):

³³ The prime form for the major bebop scale, which is the equivalent of the major scale with both a perfect and raised fifth, is [0134578T].

A-flat minor 6 th	A-flat minor 6 th	B-flat 6-9	C7 with a raised 9^{th}
[02458]	[03458]	[01247]	[0124589]
OCT 0 with G as an	Major bebop scale	B-flat blues scale	OCT 0 with B as an
Outlier			outlier

Table 3-4: Pitch materials from Tatum-Waller "Jitterbug Waltz," measures 55-58.



Example 3-36: Tatum-Waller "Jitterbug Waltz," measures 55-59.

As indicated by the intervallic content of the prime forms, hexatonic subsets [048] and [014] are embedded in each of these chord realizations. In the concluding phrase of this section, measures 59-69, ninth and eleventh chord realizations result in interactions with the octatonic collection, the pentatonic scale, and the acoustic collections.

Table 3-5: Pitch materials from T	Fatum-Waller "Jitterbu	g Waltz,'	' measures 59-69.
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F7 (flat9)	Fm9/B-	B-flat	E-flat	A-flat 7	E-flat	B-flat 7
	flat	13 th with	raised		with a	sus
		a raised	11 th		raised 9th	
		11th				
[0234679]	[024579]	[013468]	[02368]	[013579]	[01347]	[02479]
OCT 0 with F as an outlier - pentatonic set	F minor pentatonic with G as an outlier	AC-2	OCT 0	AC -5 ³⁴	OCT 0	F minor pentatonic
embedded						

³⁴ The AC –5 collection includes the following flats: B-flat, E-flat, A-flat, D-flat, and C-flat.

Moreover, in this phrase and the one before it, chordal voicings emphasize the whole tone subsets [024] and [026], such as in measures 55, 58, 64, and 65. Hexatonic subsets [0148] and [048] are emphasized in the chordal voicings of measures 62 and 67.

During the third repetition of the A section, in measures 76-77, an alternate harmonization is used to connect the first and second phrases. In place of the F minor 7th (flat 5) and the B-flat 7th (flat 9), the following chords are employed: G-flat 7, B, B7, E7, and Bflat 7 sus. As with earlier sections they interact with the acoustic collection, bebop scale collection, and the octatonic collection. As shown in Table 3-6 below, the realizations of the first three chords feature more than one referential affiliation.

Table 3-6: Pitch materials from Tatum-Waller "Jitterbug Waltz," measures 76-77.

G-flat 7	В	B7	E7	B-flat 7 sus
[0123568T]	[0134568]	[012578]	[023568]	[027]
OCT 1 with G	AC -3 ³⁵	OCT 0 with B	OCT 1	
flat as an outlier		as an outlier		
-	-	-		
AC +4	major bebop	dominant 7 th		
	scale with G as	bebop scale ³⁶		
	an outlier			

In the last half of the third repetition of the B section, in measures 95-97, Tatum utilizes the AC +5 collection, with C as an outlier.³⁷ This collection becomes an alternate realization for the F7 chord with a raised 5th and lowered 9th (see example 3-37 below). Moreover, one of the voicings for this harmony, set [0258] is an almost complete cycle of fourths (without D). For the B-flat chord that follows he references the OCT 0 collection with D as an outlier.

³⁵ The AC –3 collection includes the following flats: B-flat, E-flat, and D-flat.

³⁶ The dominant bebop scale is equivalent to the major scale with both the minor and major seventh.

³⁷ The AC +5 collection includes the following sharps: F-sharp, C-sharp, G-sharp, D-sharp, and E-sharp.



Example 3-37: Tatum "Jitterbug Waltz," measures 60-69, 95-97.

The ragtime section, Act I scene iii (mm.992-1020) from Berg's *Lulu* is especially significant with its juxtaposition of ragtime's style and harmonic language with twelve tone technique. According to Dave Headlam, such juxtaposition serves dramatic ends as demonstrated by works like *Wozzeck*:

In *Wozzeck*, Act II, scene iv, Berg alternated popular, tonal, metric dance music with a metric atonal music as a juxtaposition of the outside world with the internal world of Wozzeck's torment. Within the scene, for the most part the stage band plays the popular metric music and the orchestra plays the ametric music. But occasionally the two are juxtaposed, as Wozzeck's inner and outer worlds collide. A similar procedure is used in Act I, scene iii of *Lulu*, where Alwa and Lulu chat to metric dance music played by an offstage band (Act I, m. 992-1020), Alwa sings of his inner feelings to his ametric rondo music (mm. 1021-39); then the dance music strikes up again and the conversation returns to mundane, everyday matters (mm. 1040-93). Later, in the scene, when Lulu faints and returns to her dressing room, the jazz band plays a ragtime in 2/2 juxtaposed with the orchestra playing in ³/₄ (mm. 1155-168), until the door is closed and the jazz music suddenly stops.³⁸

³⁸ Dave Headlam, *The Music of Alban Berg* (New Haven: Yale University, 1996), 215.

Jarmon identifies three categories of harmonic and melodic material in operation within in *Lulu*: sets "associated with particular characters and events," "sets with harmonic, melodic, tonal characteristics in common," and "overtly tonal passages which invite a traditional tonal interpretation."³⁹ In this section, what Headlam calls "picture trichords" from the principal row are cast in the rhythms and dense texture of a ragtime band engaged in collective improvisation. The "picture trichords" are so called because they are associated with a hanging portrait of *Lulu* which is alluded to throughout the opera as a symbol of her seductiveness. Jarmon also recognizes this as an important aspect of Berg's technique:

Such independent thematic fragments are a common feature of *Lulu* where many figurations initially derived from a twelve tone set but characterized by specific rhythmic and melodic shapes become associated with certain events in the drama and appear as independent motives at significant dramatic points later in the opera.⁴⁰

The "picture trichords" are the following: [015], [027], [025], and [025]. These trichords are juxtaposed with other presentations of the row as well as with jazz tonal harmonies in the piano. It is this association of altered jazz chords and quartal chords with twelve tone rows and sets that makes for a significant point of convergence between the vocabularies of jazz and post-tonality.

The "picture trichord" presentations of the row are identified in these segments from Act 1, scene iii: measures 994-1004, 1005-1013, and 1014-1020. In the two measures leading to the appearance of the principal row in the jazz trumpet line (m. 994), the jazz bass, along with the other bass instruments, introduce a D-G ostinato. This ostinato highlights the motivic interval of the fourth from the [025] trichord. The D as a pedal tone conveys a vague sense of centricity. However, the trichords as well as the series of non-functional harmonies that follow

³⁹ Jarmon, 100.

⁴⁰ Jarmon, 107.

do not firmly support it. In measure 993, the piano introduces two quartal chords that are repeated through measure 997, with some omissions. Meanwhile, the first presentation of the principle row is underway interjecting set [025] along with its inversion. Also in measure 995, the piano doubles the note G-sharp/A-flat from the jazz trumpet line. This note behaves as a lowered seventh above a B-flat that is played on the downbeat – thereby evoking the jazz sound in that moment. The addition of the A-flat and the elimination of notes in the piano part gives rise to sets [026], [024], and the motivic [027] which will appear later in the section.

In measure 997, the motivic trichords [015] and [025] appear in the piano part independent of any row presentation. It is in the last half of the next measure that an altered seventh chord progression ensues. This is a jazz tonal allusion in an otherwise post-tonal atmosphere. The harmonies emerging from measure 998 (beat 2) – measure 1004 are the following: DM9; B9; Gm with a raised seventh and an added sixth; C-sharp fully-diminished seventh chord; G7 with a lowered ninth; G7 with a raised ninth; and A-flat 7th with a raised ninth, lowered ninth and an added sixth. It is worth noting that the progression begins with a DM9 and ends with a dominant substitute built on the lowered fifth, A-flat. Moreover, reading D as the central pitch, there is a strong emphasis on its subdominant G. On the downbeat of measure 999, there is a G minor raised 7th chord, which is a prevalent sonority within this paradigm.

Additionally, in measure 1000, from Berg's *Lulu*, the "subdominant harmony" continues to be emphasized as a "jab-like" gesture takes over the entire texture including the piano. This time it is a G7 chord with both a flattened ninth, an inversion of set [01369]. Embedded in both the G7 altered sonority and the G minor raised seventh is the trichord [026] which is imitated by the entrance of a principal row form in the violin in the next measure, m.

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1001. A second "jab" gesture occurs in measure 1002. Its harmonic accompaniment consists of a major-minor sonority on A-flat. This extended sonority comprises set [013479] and is fully embedded in OCT 2.

In measures 1005-1013 the texture becomes more sparse. The percussion becomes more prominent as the principal row form travels from instrument to instrument. Each appearance of the row is punctuated by the chromatic tetrachord in the flute, a motivic subset of the row. The jazz altered chords continue in the piano over a left hand chromatic bass line spanning from A-F. Note F becomes the chord root for all of the harmonies in this ascent, signaling a shift in tonal centricity from D to F. The harmonies in measures 1005 to the downbeat of 1011 are the following: F augmented triad; AM; B-flat augmented triad; B flat minor eleventh; B-flat major; B minor with an added sixth; F minor; A-flat seventh with a raised fifth; E7; E-flat augmented; E7 with both a raised ninth, lowered ninth, and lowered fifth; and FM7 (see example 3-38). On the downbeat of measure 1011, both the piano and banjo present a principal row form with extended chord sonorities: FM7, CM9, E-flat 7, and A-flat/ G-sharp minor seventh. These comprise the trichords [015], [027],[025], and [025], respectively.

In measure 1014, the texture becomes dense again as the principal row is carried once more by the jazz trumpet followed by the clarinet. In the piano part, the section ends with a series of diminished seventh chords: F-sharp fully diminished, B-flat fully diminished, C-sharp fully diminished, and an A fully diminished, a dominant substitute. This study will return to this passage in the section that covers non-functional progressions. Berg Lulu measures1005-1011 (simultaneities only)



Charles Ives was known for his quality transcriptions of ragtime and Afro-American

music. Berlin says the following regarding Ives' transcriptions:

...The transcription is by Charles Ives (1874-1954) and is given in his *Memos* to illustrate his memories of 'black-faced' comedians... ragging their songs' in Danbury and New Haven, Connecticut, around 1893-1894...Had other transcribers possessed some of Ives's skill, the historical record might be clearer on the precise relationship between ragtime and earlier black music. The shortage of verifying performance transcriptions, though, does not negate the testimony of contemporaries, and there are earlier published sources that support the link between ragtime syncopation and Afro-American music.⁴¹

The following section from "Thoreau" taken from the Concord Sonata no. 2, consists of two alternating passages: one of relative stasis and the other more developmental section characterized by rapid rhythm and harmonic motion. It is in the latter passage that the ragtime rhythms and melodic flourishes or "licks" come forth.⁴² This sonata is certainly representative

⁴¹ Carol Lems-Dworkin, Africa in Scott Joplin's Music (Evanston, IL: Carol Lems-Dworkin, 1991), 12.

⁴² A detailed examination of this aspect will occur later in this study.

of how "he speaks in many languages, in refinements of tone quality, overtones, polyrhythms, atonality, metrical changes of a surprising nature, and complicated jazz rhythms."⁴³

In addition to the elements of style exhibited in this section, which will be discussed in greater detail later in this study, the harmony is an especially striking element. The pitch organization of this section is governed by layers of complexity. These layers of complexity include a sense of tonal centricity, altered chords redolent with the jazz vernacular, referential collections, and pitch class sets. This section is illustrative of how the more extended and complex chords become, the more representative of or even synonymous they are with referential collections. This property sheds light on the principles of "chord scale compatibility" that Tymoczko touches upon in his article "The Consecutive-Semitone Constraint on Scalar Structure: A Link between Impressionism and Jazz."44 Moreover, the dividing line between collections increasingly become blurred. For example, as found in this section of the movement, a D13th with a raised fifth and a missing third, set [013468], can be related to both AC -2 and the HEX collection. Additionally, the harmonies have a propensity for multiple meanings as stated by Schoenberg regarding extended chords.⁴⁵ This property is also demonstrated by the D 13th encountered in one of the phrases discussed below. Since this movement is not organized by bar lines, this section will be discussed in terms of phrases. Three factors influence the designation of phrases: stylistic changes, harmonic progression, and system divisions. The phrases have been designated with letters.

⁴³ James Peter Burkholder, "Charles Ives and His World," 325.

⁴⁴ Dmitri Tymoczko, "The Consecutive-Semitone Constraint on Scalar Structure: A Link between Impressionism and Jazz," *Integral*, Vol. 11 (1997): 146.

[&]quot;Jazz players often describe the rules associating scales and chords as the principles of "chord-scale compatibility." Underlying these rules is the basic tenet that scales can be used to express the function of chords that they contain as subsets. Thus an improviser can build a melody using the pitches of the whole tone scale that begins on the root of any dominant seventh chord with a lowered fifth, since that chord is subset of the whole tone scale."

⁴⁵ Schoenberg, *Structural Functions of Harmony*, 44.

The first phrase of this section, phrase z, from Ives' "Thoreau" is characterized by the richness of extended chords along with the simplicity of the bass-line (example 3-40). The first section, labeled phrase z, consists of a G major triad followed by a C13th chord. This recurring phrase has a style evocative of works such as Debussy's *La fille aux cheveux de lin* (example 3-39).



Example 3-39: Debussy La fille aux cheveux.

Like the Debussy example, the C13th chord has the pentatonic scale embedded. A pedal on C is sustained for the rest of that gesture. The notes of the melodic figure above are constituents of the C pentatonic scale. All of the notes together comprise the C mixolydian scale.

In the sections that follow, there is an ostinato consisting of alternating pedal tones, Bflat and A (similar to the coming Bolcom example). There is a chromatic tenor line that eventually interacts with the fundamental bass line. In spite of the altered chords, referential collections, and pitch class sets, there is tonally directed movement. Nevertheless, there is some complexity in the first two phrases of this section, in which there is some crossing between the bass line and inner voices. In the modified Schenkerian style bass line sketch found below in example 3-41, the relationship is shown between the pedal tones, chord roots, and the fundamental bass line.



Example 3-40: Ives "Thoreau," "phrase z", from the Concord Sonata.



Example 3-41: Ives "Thoreau," double bass line sketch.

The harmonies in the developmental passage known as phrase y are the following (beginning with B-flat in the bass): C-sharp fully-diminished seventh (or C-sharp minor with a lowered 5th); A9 with a raised eleventh or lowered fifth; A7 with a lowered ninth; C-sharp fully- diminished seventh; A7 with a raised eleventh; and A9 with an added sixth. This section primarily prolongs an AM extended harmony, with B-flat read as part of the unfolding. Moreover, this entire phrase fits into the OCT 0 collection.

The harmonies of phrase x are the following: G minor with a raised seventh; A minor seventh with a lowered fifth; a B-flat quartal tetrachord; DM7 with a lowered fifth; and D7 with an added 6th. With note A being read as a harmonized passing tone, the root movement is a long range arpeggiation of the G minor triad. Additionally, the G minor with a raised seventh

, which appears in other passages, is a sonority that is encountered throughout this paradigm as in such examples as Powell's "Tempus Fugit" and Loussier's recomposition of the Bach Toccata and Fugue in D minor.

Shown below are the harmonies and pitch class sets from phrase "w": Table 3-7: Ives "Thoreau," from the *Concord Sonata*, sets from phrase "w."

B-flat 7th with	D with both a	B-flat 7 with a	B-flat 9th with	F-sharp
a raised 5 th and	major and	raised 5 th ,	a raised 5 th	major/minor
a lowered ninth	minor 7 th	flattened and		triad
		major 9 th		
[013458]	[01258]	[01348]	[0148]	[0347]

With the exception of the last chord, notes {C, D, F-sharp}, set [026] act as pedal tones. This trichord can be interpreted as a D7 with an omitted fifth. However, due to the notes surrounding it, its meaning changes back and forth from a D dominant to a B-flat dominant. This brings to mind competing pedal tones of Bolcom as well as the role of pedal tones in other works within this paradigm. The last two chords, the B-flat 9th with a raised fifth and the F-sharp major-minor triad, share tones from the F-sharp major triad. Thereby, the chord root movement of this phrase arpeggiates a diminished seventh of the dominant – a F-sharp augmented triad which is followed by a G 11th chord with a lowered 9th. Just as with phrase "x" above, the sets from phrase "w", [0148] and [0258], are embedded in the prime form of many of the simultaneities. This property shows the importance of hexatonic and diminished intervallic patterns to the overall intervallic content of the sonorities.

Following the F-sharp major-minor triad, is an alternation of G and F extended chords leading to the first phrase featuring the C 13th chord. The chords in phrase v are the following: G eleventh with a lowered ninth; F7 with a major-minor seventh and a lowered ninth; G7 with

a lowered fifth and a major-minor seventh; and FM triad (see example 3-42). Along with alternation of the dominant and subdominant, there is an alternation of OCT 1 and OCT 2 with the following outliers: OCT 1 with C as an outlier, OCT 2 with E as an outlier, OCT 1 with F-sharp as an outlier, and OCT 2.4^{6}



Example 3-42: Ives "Thoreau," phrase "v."

After a prolongation of an altered A major-minor extended chord in the next system which also begins phrase u, there is a prolongation of an C major 9th raised 5th chord that is an example of chords conveying multiple meanings. Like set [026] found earlier, this C9th chord with an omitted third, set [0236], is embedded in the hexachordal and septachordal simultaneities in the latter half of phrase u (see example 3-43). This part of the progression is set apart by a descending stepwise bass descent and its rhythmic change to dotted eighths. Although C is the true root of the chord the surrounding notes as well as notes in the bass line can yield the following readings of the three sonorities that end that phrase: E 13th with a lowered 9th and lowered 13th; D 13th with a lowered fifth; and CM9 with a raised fifth. With these chords, contrapuntal interest is generated including oblique, parallel, and contrary motion within the same progression. Moreover, individual voices converge and diverge. This passage is comparable to Davis' "Moon Dreams" and Milhaud's *Trois Rag Caprices*, which exhibit spatial properties along with extended chords. The sets of this descending stepwise progression

⁴⁶ The notes of OCT1 are the following: C-sharp, D, E, F, G, G-sharp, A-sharp, and B. The notes of OCT 2 are the following: C, D, E-flat, F, F-sharp,G-sharp, A, and B.

in "Thoreau" are the following: [0134689], [013468], and [0134689]. The first and the last sonorities are offsets of the C diatonic collection with G-sharp as an outlier. In spite of the presence of G-sharp which may imply a traditional A minor scale, note A has no part of either chord. Nevertheless, the G-sharp undoubtedly anticipates the seventh of the AM7 chord coming in the next phrase, phrase t. Moreover, the pitches of the first and last sonorities of this phrase are identical except for doublings, shiftings, and bass note changes. As stated earlier, a jazz tonal reading would characterize them as E dominant and C dominant extended chords, respectfully. This treatment of this one collection of pitches illustrates the multiple meanings Schoenberg spoke of regarding extended chords. The second sonority, set [013468] is a subset of AC -2. The acoustic collection gains significance in a later phrase. Additionally, the hexatonic tetrachord [0148] is embedded in the second sonority, as was the case for much of phrase x discussed above.



Example 3-43: Ives "Thoreau," phrase "u."

Following a pickup sonority consisting of an A7 with a lowered 5th, the harmonies, sets, and collection affiliations in the next phrase (phrase t) are the following (as shown in Table 3-8 as well as examples 3-44 and 3-45 below):

AM 13 th ,	A major-minor	GM7 with a	B7 with a	B13
lowered 5 th ,	triad with a	raised 5 th ,	lowered 5 th ,	
lowered 9 th	lowered 5 th ,	lowered 9 th ,	lowered 9 th ,	
	lowered 6 th , and	raised 11 th , and	major 9th, 11 th	
	added 4 th	13 th .		
[012479]	[012368]	[0145679]	[01235679]	[02479]
E-flat blues	AC-3 with D as	OCT 1 with D	OCT 2 with E	C-sharp minor
scale	an outlier	sharp as an	as an outlier	pentatonic scale
E-flat minor		outlier and		
pentatonic scale		related to		
embedded		hexatonic set		

Table 3-8: Ives "Thoreau," phrase "t."

In this passage, altered A and G extended harmonies are prolonged over C-sharp and F-sharp pedals. The B harmony is being read as an extension of the G extended harmony that both proceeds and follows it. Moreover, blues and pentatonic collections interact freely with the octatonic and acoustic collections in this system in which consecutive sonorities share three to four common tones.



Example 3-44: Ives "Thoreau," phrase "t."



Example 3-45: Ives "Thoreau," simultaneities in phrases "u" and "t."

In the next system, following the C11 phrase, a phrase of altered-extended chords similar to phrase z, ensues with all tones taken from OCT 0. In the phrase that follows are the following harmonies, sets, and referential collections (see Table 3-9 and example 3-46):

G minor 9 th	Am9 with a	G minor	GM 9 th with	G minor	A7 with a
with a raised	lowered 5 th	with a raised	an added 4th	with a raised	raised 5 th
7 th		7 th , added 4 th		7 th and an	
		lowered 5 th		added 4 th	
		and perfect			
		5 th			
[01348]	[02358]	[014678]	[013568]	[01479]	[0248]
AC-0 or	AC-1	AC-0 or	AC-0 or	Blues	Whole tone
Lydian		Lydian	Lydian	collection	subset
dominant		dominant	dominant	Subset	
		with C-sharp	with B as an		
		as an outlier	outlier		

Table 3-9: Ives "Thoreau," phrase "s."



Example 3-46: Ives "Thoreau," excerpts from phrases "s" and phrase "r."

Although this passage seems on the surface very similar to the third phrase, x, note G asserts itself as a bass note via a slight increase in duration and a shifting to metrically strong beats. As a result, this change in the treatment of note G changes the harmonic labeling. Here, the acoustic collection becomes even more prominent. The blues collection also maintains its place in the harmonic landscape. Moreover, as indicated by the prime forms, hexatonic subsets are embedded in some of the pc sets. Following this phrase that prolongs extended G dominant harmony, this section culminates in an extended phrase, prolonging tonic C extended harmony over a C pedal (see example 3-47). Raised and perfect fourths alternate. All of the notes together comprise an inversion of set [0123568T]. As indicated by the prime form this set is very closely related to the AC 0 collection known in jazz as the Lydian dominant collection.⁴⁷ Note F-natural is the outlier. Moreover the notes of this system are fully embedded in the extended C blues scale: {C D E-flat E F F-sharp G A B-flat C}.



Example 3-47: Ives "Thoreau," phrase "r."

In Ligeti's *Fanfares*, from his Etudes for piano, a WT 0 ostinato which includes outliers F and B, is not only the constant but the primary feature. This study will focus on the first thirty-three measures of this etude. As whole tone zero alternates between the left and right hands in invertible counterpoint, chords and gestures evoking the jazz idiom occurs in the other hand (see example 3-48). The content of the chords in the other hand pulls from both whole tone collections; only occasionally presenting the twelve-tone aggregate. These lines of dyads are also pulled from the dominant and major bebop scales as well as the blues and acoustic collections. The dominant and major bebop scales are sets [0123578T] and [0134578T], respectively (see Table 3-10). The blues and expanded blues collections are sets [012479] and [01234578T], respectively. The simultaneities between both hands alternate between major and

⁴⁷ The AC 0 collection includes a F-sharp and a B-flat.

minor triads, often fitting the tonality of the accompanying jazz scale. Hence, this is a

counterpoint of pitch collections.

Table 3-10: Pitch materials in Ligeti *Fanfares*, from the Etudes, measures 1-33.

Measures 2-3	[0134578T] A-flat bebop 5 common tones with whole tone one and the remaining tones from whole tone zero
Measures 3-4	[01235678] C7 bebop, with E-flat as outlier 4 common tones in whole tone whole tone one and the remaining tones from whole tone zero
Measures 5-6	[01245679] 7 common tones with F expanded blues 4 common tones with each whole tone collection
Measures 7-8	[013478] E major bebop scale five common tones with last major bebop This hexachord evenly split between whole tone collection
Measures 10-11	[0134578] C7 bebop
Measures 12-13	[0134578] A-flat major bebop
Measures 13-14	[01234678] F-sharp blues
Measures 15-17	12 tone aggregate minus two The missing tones, C and F-sharp, are in the ostinato
Measures 18-19	5 common tones with E-flat blues scale, hexatonic 3 with D-flat as an outlier
Measures 20-21	[01245679] F blues scale embedded excluding the B-natural
Measures 22-23	[01234678T] fully embedded in AC -5 and whole tone collection 7 out of 9 common tones with F expanded blues
Measures 24-25	12 aggregate minus C-sharp
Measures 28-29	[0124578T] 7 out of 9 common tones with C expanded blues scale
Measures 29-30	[0125689](inv.) six common tones with C major bebop scale compare to measures 7-8- last major bebop, E major, is fully embedded shares 6 common tones with the A-flat major bebop in measures 2-3 (C-E-A-flat augmented triad)
Measures 31-33	[0124568T] 7 common tones with F expanded blues scale

In the first thirty-three measures, the tonality of the scales are some alteration of note names F, A, C, and E. Therefore, the result is a long range arpeggiation of chords such as the F minor raised 7th, A-flat 7, and F minor 7th. The twelve-tone aggregates serve as formal markers.



Example 3-48: Ligeti Fanfares, measures 1-4.

Bolcom's etude, "Premonitions" from the *Twelve Etudes*, makes a case for the unity between jazz and post-tonal vocabularies. This post-tonal etude is characterized by rich harmonies and string plucking gestures, which evoke the harmonic vocabularies and the note inflections of jazz and the blues. In fact, this etude is well suited for an exploration of extended chord harmonies and the relationships derived from their manipulation. Its harmonies, which reflect a dualism between the whole tone and octatonic collections, can be described with jazz nomenclature. The following in Table 3-11 is a jazz theoretical labeling of the opening measures.

	m. 2					m.3		
Right	Fm 11 th or	B-flat 7	G diminished	Fm 11 th	EM with	Fm11th	Gm9th	Fm11th
hand	A-flat 9 with 6 th	with flat 9 th	with flat 9 th		flat 5 th , shrp. 9 th , and flat 9 th		with 6 th	
Left	A dominant 1	1 th				A dom.	F-shrp.	А
hand						dom.	11 th ,	11 th
						11 th	flat 5 th	

Table 3-11: Pitch materials in Bolcom "Premonitions" from *Twelve Etudes*.

	m.4			m.5		m.6			
Right hand	FM11th shrp. 5th	G-flat FM minor 11 th 9 th	Gflat Gm min. 9th 9th	FM 11 th , Shrp. 5 th	Fm11th	Fm11th	FM11th, shrp. 5 th	Fm11th, flat 9 th	Gm6 shrp. 7 th & M9th
Left hand	F-shrp 11 th , flat 5th flat 9 th shrp. 9th	Am7, flat 5 th	A dom. 11th	Am7 with 7th flat 5 th	E-flat with shrp. 9 th	A dom. 11 th	CM with shrp. 11th		

Table 3-11, cont'd: Bolcom "Premonitions" from Twelve Etudes

Although a few of the harmonies merit some complex descriptions, they do consistently fall into a pattern that yields itself to jazz nomenclature. The use of jazz chord labeling helps to relate seemingly unrelated notes to a single root and to one another. Moreover, as harmonies demand more complex descriptions, the "multiple meanings" created by the chordal alterations becomes increasingly apparent. One reading of this passage conceives of the right and left hands occupying independent "bitonal" realms. In the left hand, an A dominant harmony predominates while in the right hand F major/minor harmony prevails. Another reading of the passage conceives every harmony as a chromatically elaborated prolongation of a single harmony. The question as to which harmony could be debated since the three pedals introduced in the first measure A-flat, A-natural, and B-flat are sounded throughout the work. Based on the first section the A dominant harmony would be a good candidate with the F harmony serving as a harmonized added sixth. However, when considering the rest of the work, A-flat and B-flat are stronger candidates by the shear number of repetitions. The B-flat edges its other opponents out as the most important pitch with its appearance as a low sustained pedal in the final measures. The A dominant harmony of the first section is a viable dominant substitute for Bflat. Incidentally, in the second section two sonorities predominate: B-flat 7 with a flat fifth, a sixth, and a lowered ninth; and a B-flat 11th with a major-minor seventh, and a raised 5th. The

second chord could also be read as an A-flat dominant 7th chord with both a major and minor ninth. These two chords alternate in a rhythmless limbo with incremental parsimonious changes between. Ultimately, this etude is about stasis as its second section reveals. In the first section, this stasis is camouflaged by the rhythm and fluctuating intervallic space that gradually disintegrates into a second dyad.

Post-tonal analysis focuses on the activity of pentachords and their relationship with referential collections. In measure 2, after the initial left hand gesture, [02469], the following sets are played in the right hand: [02479], [01369], [01369], [02357] and [02357] (see example 3-49). The initial set found in the left hand is a voice leading offset from the whole tone collection's [02468]. The sets of the right hand are offsets of [0258], which has the following subset-superset relationship⁴⁸ with the octatonic collection:

(2 3 3 4) [0258]

(1 2 12 12 121) octatonic collection

In the third measure, the succession of left hand gestures include: [01346], [01469], and [02469]. The first two sets are embedded in the octatonic collection while the third set is a voice-leading offset of the whole tone pentachord. The succession of right hand gestures include: [02458], [01358] and [02357]. Like the others, these sets indicate whole tone and octatonic collection relationships.

⁴⁸ The subset-superset relationship is indicated by the interval normal form. Interval normal form shows the intervallic profile of all sets belonging to a given prime form. A comparison of interval normal forms often reveals intervallic relationships between different prime forms.



Example 3-49: Bolcom "Premonitions" from Twelve Etudes, measures 1-4.

In the contrasting texture found in measure 7, sets [02368] and [023469] alternate (see example 3-50). The addition of a note makes the former set [023568], a complement of the latter. The first set has the half-diminished seventh chord as an embedded set. The second set has the fully diminished chord and an A-flat dominant seventh chord as embedded sets. As indicated by the prime form, both sets have affinities with the whole tone collection. The first set is fully embedded in OCT 1. The second set embedded in OCT 2 with B-flat, the motivic pitch, as an outlier.



Example 3-50: Bolcom "Premonitions" from Twelve Etudes, reductive sketch of section B.

The earlier Powell selection was clearly a tonally directed example with jazz sonorities creating pockets of referential allusions. Bolcom's "Rag Inferno" from the *Twelve Etudes*, on the other hand, is a post-tonal piece with a less clear tonal centricity and direction. Harmonically, it can be accurately described with both jazz nomenclature and post-tonal analysis. With its allusion to the ragtime style and the chordal structures of tonality, there remains pockets of vague tonal centricity. Regarding his *Twelve Etudes* Bolcom states:

I now embark on a stylistic and harmonic synthesis no longer involved with any local style—that of a fusion of tonality into non-centered sound (often miscalled 'atonal'), as a planet in space draws gravity toward itself. Within this spatial (yet tonal) universe, one can attempt to calibrate one's distance from a strong tonal center with greater accuracy.⁴⁹

In Table 3-12 and example 3-51 below are altered chords and the pitch collections they evoke as found in the opening measures. The chordal changes occur every two beats. In contrast, a single referential collection is largely sustained for an entire measure.

	m.1	m.2	m.3	m.4	m.5
Chords	bts. 1-2	bts .1-2	bts .1-2	bts .1-2	Bts .1-2
	СМ	A-flat 13th	G 13 th	F-sharp 13 th	C7, raised 11 th
	bts. 3-4	bts .3-4	bts .3-4	bts .3-4	bts. 3-4
	E-flat 7,	D7, raised 9th	D-flat 7,	G-sharp 7,	E7, lowered
	lowered 9th		raised 9th	lowered 5 th ,	9 th
				lowered 9 th	
Referential	bts. 1-4	bts. 1-4	bts. 1-4	bts. 1-4	bts .1-2
Collections	OCT 0	OCT 2, D-flat	OCT 1, C as	OCT 2, E as	OCT 0
		as outlier	outlier	outlier	bts .3-4
					OCT 1

Table 3-12: Bolcom "Rag Inferno" from the Twelve Etudes, measures 1-5.

⁴⁹ Joshua Berrett, "Review," American Music, vol. 7, no.2 (Summer 1989): 234-5.



With the exception of the fifth measure, each adjacent harmony shares at least one common tone. These altered chords can be read as chromatic embellishments of a I - V - I progression in C. The tonic harmony is "prolonged" in the first and fifth measures, while the dominant harmony is prolonged and embellished in measures 2-4. With altered ninths and fifths, these chords consistently evoke the octatonic collections.

The left hand and right hand together in measures 6-8 of the "Rag Inferno" generate the following harmonies as described by the jazz vernacular (example 3-52): F9 with a raised fifth; E-flat 11th with a raised ninth; A-flat 7 with a raised fifth; C7 with a major seventh and a raised ninth; F-flat major 9th, and G dominant 13th with both a raised and lowered fifth. Just as other examples found within the paradigm, there is a dominant 7th chord which includes a major 7th along with the minor 7th. With increased alteration of the fifth along with the ninth, the whole tone and octatonic collection alternate in the following manner: in measure 6, WT1 and OCT 2 with G and B-flat as outliers; in measure 7, WT0 and OCT 0 with E as an outlier; and in the last half of measure 8, OCT 1 with E-flat and A-natural as outliers. Although instances of the octatonic collection in this passage contain up to two outliers, a consistent pattern of alternation between the two collections has been established. This alternation between the two collections is evocative of the Powell example which blurs the relationship between them. Measures 9-10 extend the phrase with the following harmonies: CM7 with a raised 11th, E7, B-flat minor 7th and E-flat minor seventh. These harmonies can be read as an embellished unfolding of I and V. Each of these chords can be found as subsets of the octatonic collections.



Example 3-52: Bolcom "Rag Inferno" from the Twelve Etudes, measures 6-8.

In measures 11-13, similar right hand gestures are encountered. The sets in the syncopated right hand are the following: [0126], [0126], [0237], and [01368] (see example 3-53 and Table 3-13). As indicated by the prime form, there is a strong emphasis on the tritone. The left hand chords, contrasting rhythmically and harmonically, have the following interpretation within jazz nomenclature that is increasingly complex: A-flat minor 13th with a raised fifth, a lowered 9th; A major 13th; E-flat 9th with both a raised 5th, a lowered 5th; G7 with a lowered fifth, a major seventh, a raised 9th, and a lowered 9th; A-flat dominant 11th with a major seventh; E7 with double sevenths, and on the downbeat of measure 14 – G minor 7th with a lowered 5th and a raised ninth. The increasing complexity demonstrates that chromatic jazz harmonies finds a counterpart in post-tonal harmonies, and vice versa.



Example 3-53: Bolcom "Rag Inferno," measures 11-13.

The root movement consists of half steps, tritones, and thirds. Again, the whole tone and octatonic collections alternate inspite of outliers:

	m.11 (last half)	m.12	m.13
Chords	Bts. 3-4 A dom. 11 th with an added sixth, a major 7 th , and a raised 9 th	bts. 1-2 D-flat dom. 9 th with an added sixth, and a raised fifth	bts. 1-2 A-flat 7 with a major 7 th , and a raised 5 th
		bts. 3-4 G minor with a lowered 5 th , major and minor 9 th	bts. 3-4 E7 with a major 7th
Referential Collections	OCT 1 with D-flat and G as outliers	bts. 1-2 WT1 with B as an outlier bts. 3-4 OCT 1 with A-natural as outlier	bts. 1-2 WT0 with C-sharp and B as outliers bts. 3-4 OCT 1 with D-sharp as outlier

Table 3-13: Bolcom "Rag Inferno" from Twelve Etudes, measures 11-13.

In the third measure of Loussier's recomposition of the fugue from Bach's Toccata and Fugue in D minor, note C-natural of the original tail motive is raised and harmonized with minor thirds giving rise to the an AM9 chord and an A dominant lowered 9th chord in measure 3. The impetus for such a harmonization is undoubtedly taken from several passages of dominant 7th prolongation in the original which feature 9ths above the bass, such as measures: 21, 75-78, 97-98, and 109. Of course, in traditional tonal theory, these "9ths" are regarded as non-harmonic. However, for post-tonal and jazz traditions with a propensity for analyzing music of the past in their own images, there are plenty of grounds for misreading.⁵⁰ Loussier's reinterpretation of Bach's toccata and fugue with the vocabularies of jazz and post-tonality provides additional insight in how they converge within this compositional paradigm.

⁵⁰ Straus, 17.

The original toccata and fugue is essentially an elaboration on two cadential prototypes: V7-I and the fully diminished seventh to I. The motivic significance of leading tone gestures is communicated from the onset of the introduction. At times the two dominant harmonies of the toccata and fugue are combined, creating a V9 sonority, that is, when everything is regarded as harmonic. Incidentally, the emergence of the V9 sonority from these two chords, the dominant seventh and the fully diminished seventh, is in keeping with Schoenberg's theoretical derivation of the V9 chord as noted in the *Harmonielehre*.⁵¹ Moreover, the A dominant lowered 9th chord is a constituent of the jazz vernacular. It is also a member of the octatonic zero collection.

On the final sixteenth-note of the measure 4 of the Loussier recomposition, there is a momentary glimpse of the D minor raised seventh chord that Loussier will use increasingly through the course of the fugue (see example 3-54). Undoubtedly, the impetus for this chord comes from a misreading of the C-sharp fully-diminished chord over a tonic pedal found in measures 4-5 and 12-13. The D minor raised seventh chord, which is popular within the jazz idiom, is also a subset of HEX 1. Incidentally, the minor raised seventh sonority was also encountered in Gershwin – attesting to the unity of the compositional paradigm.



Example 3-54: Loussier-Bach Toccata and Fugue in D minor, measures 3-4.

⁵¹ Schoenberg, *Theory of Harmony*, 153.

The treatment of the answer is very similar to the first entrance of the subject. In fact, the only part of the answer that is harmonized is the tail motive – thereby conferring greater emphasis on the tail motive. Loussier's harmonization features the fully diminished seventh chord from both D minor and G minor. The D dominant lowered ninth chord, an inverted form of set [01369], does not appear until the "and" of beat four in measure 76. The notes of this chord are also embedded in OCT 2. The episodic section that follows, beginning in measure 77, receives the following harmonic treatment (as seen in example 3-55): G minor raised seventh, C minor 9th raised seventh, F major seventh, B-flat major seventh, G minor 7th, G minor raised seventh, A dominant lowered ninth chord, D minor with an added fourth G-sharp, G minor raised seventh, C-sharp diminished 7th, and D minor with an added fourth, G-sharp. Similar to the original, Loussier begins sequential progression of fourths. The first chord can be easily misread from Bach's original answer. In measure 35 of the Bach fugue, note F-sharp appears in both the treble and the bass as G minor harmony is arpeggiated.



Example 3-55: Loussier-Bach Toccata and Fugue in D minor, measures 77-80.

In measure 79 of the Loussier recomposition, a departure is made from the pattern of minor raised seventh chords with a FM7 chord. The choice of a VII chord is consistent with the original. Loussier simply translates it into the jazz vernacular by making it a major seventh chord. However, what is of interest is that Loussier creates a cross-relation with the right hand

by holding on to the E-flat in the melodic figures. The F major triad with two sevenths sounding in measure 79, shares three common tones with the D dominant lowered 9th chord in the key of G minor.

In measures 81- 86, Loussier departs from the vi – ii diminished – V – i progression in D minor (see example 3-56). Instead, he focuses largely on a transposition of one of his motivic sonorities, the G minor raised 7th chord.⁵² In the next few measures, which is dominated by that sonority, a curious D minor chord that has an added G-sharp appears twice. This chord also creates a cross-relation with the G-naturals sounding above it.⁵³ The note G-sharp first appears in the very first harmonization of the tail motive in an AM 9th. This G-sharp is surely associated with the dominant of the dominant. In measure 22 of the original Bach toccata, a G-sharp fully-diminished seventh chord is followed by A7.⁵⁴ In the Loussier recomposition, the D major chord with an added fourth (G-sharp) is an inverted form of tetrachord [0136]. Set [0136] is embedded in set [01369], from the D dominant lowered 9th in measure 76. This chord could also be read as a D minor chord with an added lowered fifth, tetrachord [0147]. As well as being a voice leading offset, set [0147] shares some intervallic content with hexatonic subset [0148]:⁵⁵

- $(1 \ 3 \ 4 \ 4)$ [0148]
- (3 31 5) [0147]

⁵² Loussier's recomposition of the Gavotte from the Partita No. 1 in B minor, BWV 1002, includes ninth chords, added 6th chords, as well as minor raised seventh chords.

⁵³ Other cross relations are found in measures 106-111.

⁵⁴ It is worth noting that in Reger's arrangement of this toccata and fugue the opening A-G-A gesture is consistently replaced by A-G-sharp-A.

⁵⁵A comparison of interval normal forms often reveals intervallic relationships between different prime forms.



The D minor chord with an added lowered fifth also is embedded in OCT 2.

Example 3-56: Loussier-Bach Toccata and Fugue in D minor, measures 81-88.

In measure 20 of Stravinsky's *Tango*, a G7 harmony is colored by both a flattened ninth and raised ninth, A-flat and B-flat (see example 3-57). The presence of the raised ninth along with the lowered 9th in a G7 chord, creates the major-minor third sound that Pieter C. van den Toorn identifies as a Stravinskian trademark.⁵⁶ This type of sonority also resonates with the extended chord jazz harmonies of Gershwin, Davis, and Brubeck as found in this study. Brubeck's chorale with its C major/C minor bimodality, which will be discussed shortly, also comes to mind, thereby demonstrating the unity of the compositional paradigm. This Stravinskian Tango demonstrates how bitonal structures interact with jazz harmonies and referential collections.

⁵⁶"In other words, I quite often find it advantageous to regard (or hear) cases of 'major-minor third' emphasis – or ... 'clash,' perhaps the most persistently pursued of all 'impurities,' certainly the most frequently cited – as octatonically inspired, as a species of octatonic-diatonic interpenetration, so that, apropos the C scale on D reference at Nos. 112-118 in the second movement of the *Symphony in Three Movements*..." Pieter C. van den Toorn "Some Characteristics of Stravinsky's Diatonic Music," *Perspectives of New Music*, Vol. 14, No. 1 (Autumn- Winter 1975): 124.

With the alterations, the G7 further establishes itself as an OCT 1 sonority. The eleventh, C, is an outlier. Note C-natural being an outlier is in keeping with its inclusion in the double seventh C /C-sharp motive in this piece.



Example 3-57: Stravinsky Tango, measures 19-21.

In measures 22-24, as the tonic D minor harmony is arpeggiated and prolonged, color shifts or alterations are introduced via chromatic lines. A descending chromatic line, {A, A-flat, G, and F-sharp} moves from the left hand to the right as the D minor arpeggiations move in the opposite direction – from the right hand to the left. This is an example of inverted counterpoint which will be discussed in more depth later in this study. The descending chromatic line introduces a juxtaposition of the flattened fifth with the perfect fifth of the chord. It also introduces the eleventh, and a major third that "clashes" with the minor third of the harmony. The repetition of these pitches in each of the three measures supports a reading that of these pitches as harmonic tones. Additionally, in measure 23, chromatic lines in the inner voices give rise to two sevenths, C-natural and C- sharp, as well as a flattened ninth, E-flat. So far, every alteration of the tonic D minor harmony, with the exception of C-sharp and G-natural, fit into the OCT 2 collection. In the next measure, measure 24, we encounter a second chromatic line an octave below beginning on note A4 moving in contrary motion to the descending chromatic line. With such contrapuntal touches, this passage certainly serves as a lesson in how these chromatic alterations and referential collections can be derived chromatically and

contrapuntally. As these two lines converge to form a major third on the last beat, parallel tenths (B - G-sharp and B-flat - G} arise along with the following additional alterations to the D minor harmony of a raised 5th and an added 6th. The parallel tenths occurring between A-flat - B-natural and G - B-flat were seen earlier in measure 20, as alterations of the G minor 7th harmony. After the downbeat of measure 24, octatonic one is evoked with A-natural and F-sharp as outliers. It is fitting for these notes to be outliers, since the alterations of the third and fifth of the tonic chord are given substantial emphasis throughout.



Example 3-58: Stravinsky Tango, measures 22-24.

In Gilbert's discussion of "Blue, Blue, Blue," he highlights how Gershwin cleverly uses

the pentatonic scale in an experiment with a twelve-tone chromaticism that evokes atonality.⁵⁷

The two-measure introduction constitutes a cycle in that its four chords , of which three are distinct, collectively contain all twelve notes. The first two chords, in m. 1, are the same except for the transfer of G from the lowest (g) to the highest (g2) position; their pitch content – consists of the pentatonic scale C-D-F-G-A, whose equivalent in number notation is 0,2,5,7,9. The two chords in m.2 are also pentatonic but at different transpositions: A-flat – B flat – D-flat – E-flat – F for the first chord, B – C-sharp – E – F-sharp – G-sharp for the second. These three pentatonic scales contain all twelve notes, with three repetitions...Pentatonicism played an important role in Gershwin's music almost from the beginning; thus one can see a natural extension of this tendency in his use of pentatonic figures to build chromatic entities.⁵⁸

⁵⁷ Gilbert, 147. In "Blue, Blue, Blue" there is "a vocal part containing only the pitches F-sharp and A, each repeated for four measures straight, pitted against an accompaniment that is as close as Gershwin ever came to atonality."

⁵⁸ Gilbert, 147-148.

An understanding of how Gershwin manipulates the pitch materials of jazz/blues as well as other referential collections such as the pentatonic scale provides insight into the relationship between jazz harmonic vocabularies and post-tonality. In those same two measures there is evidence of an additional referential collection. Although Gilbert primarily focuses on the verticalities, melodically each voice exhibits a transposition of set [0145], a subset of the hexatonic set. The lowest voice in the treble clef accompaniment, featuring the repeated note F, is an exception articulating set [014].

In the chords that follow in measures 3-11, Gilbert identifies twelve-tone aggregates. In addition to the aggregates, the dense chromaticism results in a series of altered dominant extended chords. Table 3-14 below shows both the chord symbols and the four-part voicing pattern for this series of dominant sonorities. The voicing pattern is two measures in length and repetitive. The second half of every measure is a transposition of the first half of the measure. In measures 8-11, the voicing pattern is transposed at an interval of a minor third above – again centralizing that motivic interval. Throughout this passage, note F-sharp is maintained in the vocal part and the topmost voice in the accompaniment. As this single pitch is maintained, the function of that pitch changes in the course of the progression. For example, in measure 3, F-sharp changes from a lowered fifth in the C9 to a 13th in the A9 chord. Meanwhile, the chromatic movement in the lower voices gives rise to the coexistence of competing 5ths (lowered and raised), major 6ths (13ths), 7ths, 9ths (major, lowered and raised), and 11ths. This chromatic passage in Gershwin exposes the fine line between post-tonality and the altered chord vocabularies of jazz.

m.3 C9	A9	m. 4 F-sharp9	A9
Flat 5	13 th	Root	13th
9 th (b9, R)	9 th (b9, R)	9 th (#9, 3)	9 th (#9, 3)
Flat7 (13,#5)	Flat 7 (13,#5)	Flat 7 (M7,R)	Flat 7 (M7,R)
Third (#9,9)	Third (#9,9)	Third (11,b5)	Third (11,b5)
m.8 E-flat 9	С9	m. 9 A9	С9
Flat 5	13 th	Root	13th
9 th (b9, R)	9 th (b9, R)	9 th (#9, 3)	9 th (#9, 3)
Flat7 (13,#5)	Flat 7 (13,#5)	Flat 7 (M7,R)	Flat 7 (M7,R)
Third (#9,9)	Third (#9,9)	Third (11,b5)	Third (11,b5)

Table 3-14: Gershwin "Blue, Blue, Blue," measures 3-4 and 8-9.

In addition to the linear chromaticism giving rise to altered dominants, it must be noted that this series of simultaneities are alternations of the whole tone collection. In measures 3-6, WT 0 alternates with WT 1 with F-sharp as an outlier (see example 3-59).



Example 3-59: Gershwin "Blue, Blue, Blue," measures 3-4.

In measures 8-11, WT 1 alternates with WT 0 with note A as an outlier. The reversal of this pattern of alternation invokes a palindromic design.

During the verse, the competing key of G is the source of all subversion to the key of C and tonality in general. In the refrain, the G chord maintains this role as its prolongation is
embellished by a harmonized chromatic descent also featuring competing fifths (perfect, lowered, and raised), sixths, sevenths, and ninths (major and raised). Although measure 16 prolongs the G chord, in each voice from left to right in measure 16, all twelve notes are revealed with the exception of A-flat.

In the "Crap Game Fugue" from Gershwin's Porgy and Bess, interaction between altered chords and referential collections can be observed in the context of the fugal form. In the first four measures, there is a duality between the tonic harmony, G minor, and the prolongation of the dominant pedal, D, in the right hand (see example 3-60). In measure 1, both the major and minor sevenths are present as well as a raised sixth scale degree. The simultaneity found on the first beat of measure 1 creates an interesting harmonic color - G minor with a raised 7th. This harmony which comprises the hexatonic subset [0148] is encountered in other works examined in this discussion. Additionally, if notes C and E are counted as an added 4th and 6th respectively, this group of notes are embedded in octatonic zero with note D, the dominant pedal as an outlier. These notes also comprise an inversion of set [013468T], which is an offset of the Petrushka chord, set [013679].⁵⁹ On beat two of measure 1, the leading tone is lowered to form a G minor 7th with an added 6th. On beat 1 of measure 2, there is dominant harmony featuring both a major and minor third as well as a perfect and diminished fifth. Counting everything as chord tones, this harmony is a D7 with a lowered fifth and a raised 9th. All of the notes together fit into hexatonic one with A-flat as an outlier. In the second half of measure 2, the G minor raised 7th harmony returns. In the next measure, the fifth of the G minor raised 7th chord is lowered in the left hand just as in the dominant sonority. This alteration creates a sonority that is also encountered in the Powell and Loussier examples. All

⁵⁹ In *The Music of Gershwin*, Gilbert identifies Stravinsky and his Petrushka chord harmony as an influence.

of the notes of measure 3 together fit into the octatonic zero collection with the D pedal as an outlier.



Example 3-60: Gershwin "Crap Game Fugue" from Porgy and Bess, measures 1-3.

In measures 4-6, the tonic harmony is prolonged amidst alterations to the third and seventh as well as the addition of a lowered ninth and an added 6th. The first beat of measure four has a collection of notes which fit into OCT 1 with note A as an outlier. They also fit into the expanded G blues collection with A-flat as an outlier.⁶⁰ The notes in the last half of measure 4 also fit into the G blues collection with F-sharp as an outlier. The notes in measure 5-6 fit entirely into OCT 1.

As the theme returns in G minor, the tonic harmony is embellished with a flattened fifth, D-flat, in the topmost voice in measure 14 (see example 3-61). The resulting harmony is a G minor raised 7th chord with a lowered fifth. Moreover, the three-note gesture in the top voice {D-flat, C, B-flat} outlines a motivic interval of a minor third. Concurrently, there is an arpeggiation of the B-flat major triad in the bass. Hence, there is a B-flat major-minor conflict happening between the top most voice and the bass line by measure 15. This pitch conflict is also played out rhythmically between overlapping three note gestures in the texture.

⁶⁰ The expanded G blues scale is the following: G A B-flat B C C-sharp/D-flat D E F G.



Example 3-61: Gershwin "Crap Game Fugue" from *Porgy and Bess*, measures 13-15.

Another example of how altered chords interact with referential collections in this fugue occurs in measures 67-72 (see example 3-62). With the exception of one chord, the following series of major-minor 7th chords or dominant raised 9th chords is found: E-flat 7 with a raised ninth and a lowered fifth; E7 with a raised 9th; F-sharp 7 with a raised ninth; B-flat 7 with a lowered fifth; and A7 with a raised ninth and lowered fifth. In addition, the chords with the lowered fifth retain the perfect fifth of the chord as well. With the exception of one chord, this series of chords is notated as "bitonal" entities, often highlighting a tritone relationship between the bass note and the chordal root of the right hand: E-flat7 raised 9th/ A; Em/G-sharp; F-sharp 7 with a raised 9th; B-flat7 / E; and A7 with a raised 9th /E-flat major. Moreover, the bass line notes, {A, G-sharp, F-sharp, E, E- flat}, are embedded in OCT 2 with E as an outlier. Note E is of significance being the fifth scale degree of the coming A7 chord that will close out this passage. With each chord in measures 67-72, there is an alternation between OCT 0 and OCT 1. The parsimonious voice leading of the chords found in measures 67-69, exhibit an alternating pattern of a half step with a whole step.

In addition, the sets present in this passage are the following: [013479], [01469], [01469], [02368] and an inversion of set [0134679]. The first two sets are voice-leading offsets

of one another. The two sets of [01469] have a T2 relationship, while retaining one common tone. Sets [01469] and [02368] share the following subset-superset relationship:⁶¹

32313	[01469]

 $2\ 1\ 3\ 2\ 4$ [02368]⁶²

Moreover, the last two sets have the following subset-superset relationship:

- 2 1 21 2 13 [0134679]
- 2 1 3 2 4 [02368]



Example 3-62: Gershwin "Crap Game Fugue" from *Porgy and Bess*, measures 67-69, 72, and 74-75.

As Crown renders the fatal blow to Robbins, beginning in measure 72, there is a chromatic ascent of [025] trichords over chromatically ascending parallel thirds (see example 3-63). Set [025] is a voice-leading offset from set [015] present in the fugal subject.⁶³ These trichords are also related to Ligeti signals and note clusters.⁶⁴ Like Ligeti signals they occupy an intervallic space of a perfect fourth, which is subdivided into a second and a third. It is appropriate that such a sonority is encountered here considering the gravity of the dramatic action that is occurring. Each trichord in combination with the motivic minor third dyad in the left hand forms an inversion of set [01468], an octatonic pentachord. This two octave chromatic

⁶¹ The subset-superset relationship is evident in a comparison of interval normal forms.

⁶² The INFs are shifted to show the intervallic correspondence between them.

⁶³ Joseph N. Straus, "Uniformity, Balance, and Smoothness in Atonal Voice Leading,"

Music Theory Spectrum, Vol. 25, No. 2 (Autumn 2003): 305-352.

⁶⁴ Marina Lobanova, *Gyorgy Ligeti: Style, Ideas, Poetics,* trans. Mark Shuttleworth (Berlin: Verlag Ernst Kuhn, 2002), 110.

ascent of trichords and thirds begins and ends with an A major-minor chord or an A dominant seventh chord with a raised ninth chord.



Example 3-63: Gershwin "Crap Game Fugue" from Porgy and Bess, measures 73-75.

The final chord, which is embedded in OCT 0, is written as an A7 /E-flat7 bitonal chord over an A pedal. As a result, this sonority has both the raised and lowered 9th as well as a perfect and lowered 5th. This "bitonal" chord formation is also evocative of Milhaud's polytonality, thereby demonstrating the unity of the compositional paradigm.

CHAPTER 4

HARMONIC CONVERGENCES II

Nonfunctional and Neo-Riemannian progressions

Nineteenth century harmony and progressions have had an impact on jazz and posttonal music alike. Substitute and vagrant harmonies,¹ linear chromaticism, parenthetical tonality,² implied tonal regions, expansions of the dominant, third relations, and Neo-Riemannian progressions find their continued development in jazz and post-tonal harmonic vocabularies. David Carson Berry asserts: "[the] attenuation of tonality was part of a tradition that extended from mid-nineteenth into the twentieth century – one that stretched from Liszt and his contemporaries through Schoenberg and his pupils and beyond…"³ The reference to "beyond" is being interpreted to include jazz. In confirmation, the link between nineteenth century harmonic progressions and post-tonality has been chronicled in Schoenberg's *Structural Functions*, which includes a Chart of Regions that closely resembles the *Tonnetz* regions of Neo-Riemannian theory. Regarding the application of Neo-Riemannian theory to other musics such as jazz, Guy Capuzzo maintains:

As Cohn elaborates, Neo-Riemannian theory arose in response to analytical problems posed by chromatic music that is triadic but not altogether tonally unified. Such characteristics are primarily identified with the music of Wagner, Liszt, and subsequent generations, but are also represented by some passages by Mozart, Schubert, and other pre-1850 composers. Neo-Riemannian theory is also useful in the analysis of musical

¹ Schoenberg, Structural Functions of Harmony, 197.

Substitute harmonies are essentially borrowed chords. Vagrant harmonies are indefinite harmonies with multiple meanings.

² Miguel A. Roig-Francoli, *Harmony in Context* (Boston: McGraw Hill, 2003), 808.

A tonal parenthesis is a progression in which a definite tonality is established in the beginning and ending while the intervening chords are indefinite. Implied tonal regions have a tonal centricity that is not logically explained by roman numeral analysis.

³ David Carson Berry, "An Exploration of Liszt's Bagatelle ohne Tonart," 19th Century Music, XXVII/3: 262.

genres other than Western concert music that are tertian, tonally centric, and routinely chromatic, including certain strains of pop-rock music, as this article has argued, as well as some contemporary film music.⁴

Jazz certainly fits the description as "tertian, tonally centric, and routinely chromatic."

The works in this portion of the study form a continuum of progressions or rather successions⁵ in which trichords, quartal chords, triads, dominant sevenths, dominant extended chords are assembled in various combinations connected by chromatic or/and Neo-Riemannian voice leading. Tritone substitution, bitonality, and twelve tone rows can enhance these successions. Moreover, there are momentary glimmers of an additional step in their evolution – seventh chord transformations.⁶

The first examples of non-functional progression come from three phrases played by the woodwind section in Ellington's *Concerto for Cootie*. The woodwind and brass sections for the most part have a dichotomous relationship with much of the chromaticism appearing in the woodwinds while the brass phrases are in most instances conventionally tonal. Measures B-D⁷ feature a non-functional progression that is a prolongation or rather, an expansion of the supertonic. Its cadence by-passes the traditional tonal resolution. It commences with a B half-diminished seventh chord, half diminished seventh chord of the dominant, which is followed by G9, the dominant of the dominant. The former is an unfolding of the latter. This occurrence is illustrative of Schoenberg's assertion that ninth chords are half diminished chords with an

⁴ Guy Capuzzo, "Neo-Riemannian Theory and the Analysis of Pop-Rock Music," *Music Theory Spectrum*, Vol. 26, No.2 (Fall 2004): 177-200.

⁵ Schoenberg, *Structural Functions*, 1.

[&]quot;A succession is aimless; a progression aims for a definite goal. Whether such a goal may be reached depends on the continuation. It might promote this aim; it might counteract it...A succession of chords may be functionless, neither expressing an unmistakable tonality nor requiring a definite continuation. Such successions are frequently used in descriptive music."

⁶ Adrian Childs, "Moving beyond Neo-Riemannian Triads: Exploring a Transformational Model for Seventh Chords," *Journal of Music Theory*, Vol. 42, No.2 Neo-Riemannian Theory (Autumn 1998): 181-193.

⁷ Numbering according to Dave Berger and Alan Campbell transcription. The introductory measures are labeled A-H.

added root.⁸ After the G9 chord follows a succession of dominant extended and altered chords harmonizing the melody in the clarinet line. The chromatic descent of the individual voices are not completely parallel. There is some heterophony. Whereas, the tenor and baritone saxes are fully chromatic outlining a fifth, the alto saxes take a leap up of a third in the midst of their chromatic descent. The second alto departs from the first alto with its third being followed by a whole step. Meanwhile, the clarinet melodic line blends in with the chromatic lines with its a momentary chromatic turn-motive in contrary motion.

The chromatic descent in measures B-D culminates with a C9 chord, which is followed by a C-flat 9 – a tritone substitute for the tonic F (example 4-1). This tritone substitute has a lot in common with the B half-diminished chord and the G9 which begins this opening passage. Therefore, this phrase can be read as an expansion of the supertonic versus a phrase ending with a true cadence. Such a reading characterizes this as a non-functional progression.



Example 4-1: Ellington Concerto for Cootie, measures B-D.

This next phrase, measures E-G, is an expansion of the dominant. It consists of an almost entirely chromatic (excluding one chord) descent of both dominant extended chords and altered dominant chords. This descending progression, which spans a compound tritone (augmented fourth), commences with the dominant harmony, C9 (see example 4-2). Again, the melody is presented in the upper voice followed by a chromatic descent and a partial repeat of

⁸ Schoenberg, 287.

the head motive minus the first note. The progression culminates with a G9 which is followed by a tritone substitute for the dominant chord – G-flat 9. Tritone substitution aside, the constituents of the chord can certainly be reinterpreted as notes of an altered extended dominant on C. Additionally, there are note clusters embedded in the E-flat 9, D9, and D-flat 7 chords. These clusters span a major sixth (between B-flat and G); an augmented third (between C-flat and E) and an augmented fifth (between C-flat and G), respectively.



Whereas the last chromatic descent in the woodwinds spanned from C9 to G-flat 9, this phrase, found in measures 17-20, is a descent from G-flat 7 to a C7 flat 9 with an added sixth. Unlike the other passages, this one ends with an unambiguous cadence on the tonic. Again the melody is camouflaged, appearing in the well-blended clarinet line. The dominant G-flat extended chord at the end of the phrase is again a tritone substitute for the dominant, C (see example 4-2). This time, however, the chromatic descent nearly reaches two octaves.

Nevertheless, the chromatic descent ends on A-flat 7 – a tritone substitute for the submediant D. The A-flat 7 is followed by a D-flat 7 with a raised 5^{th} a tritone substitute for the supertonic. These final chords {A- flat7 – D-flat7 – C7 flat 9 –F} are a chromatic embellishment of the viii- V- I circle progression in F major.



In "Blue, Blue, Blue," the third relationship between the roots of successive dominant extended chords found in the first section (example 4-4) is evocative of Neo-Riemannian progressions with major and minor chords. If the root progression was considered in isolation, then the following Neo-Riemannian relationships would emerge:

G to E-flat - PL E-flat to F-sharp - PR F-sharp to C- C transform C to A – RP F-sharp to A- PR E-flat to C –RP C to A- RP A to C- PR C to E-flat - PR

The voice leading between the F-sharp and C chords is one exception that adheres to the Neo-Riemannain transformations of seventh chords. This is not a mere coincidence, considering that a fully authentic Neo-Riemannian progression is found in the "Crap Game Fugue" from *Porgy and Bess.* Again, the relationship between jazz vocabularies and post-tonality is readily encountered.



Example 4-4: Gershwin "Blue, Blue, Blue," measures 3-4.

In measures 31-32 of the "Crap Game Fugue" from *Porgy and Bess*, as the upper voices exit, the tenor voice expands into the following harmonies over a D pedal: GM - em7 - E-flat major -BM - AM - F-sharp7 -FM - fm - BM - gm - D-flat major -Am - E-flat major -Bm - E-flat major -Bm. In measure 33, the harmonies are as follows: E-flat major -Bm - E-flat 7 -B diminished -G - Em (see example 4-5). The harmonies of this passage are representative of Neo-Riemannian transformation, thereby combining this post-tonal technique with the fugal process and gestures from the jazz idiom. From em to E-flat is a RPL relationship. From E-flat major to BM with E-flat major respelled as D-sharp major is a PL relationship. From AM to F-sharp minor (7th) is a R relationship. From F-sharp minor (7th) to F-sharp major (7th) is described as a RP relationship. From F-sharp minor to F major is: RPL. From FM to fm is a P relationship. From fm to BM is: RPR. From BM to gm is: PLP. From gm to D-flat major is: RPR. From D-flat to Am is (with D-flat rewritten as C-sharp): PLP.



Example 4-5: Gershwin "Crap Game Fugue" from Porgy and Bess, measures 31-33.

In measures 72-73 (example 4-6), there is chromatic planing of dominant lowered ninth chords voiced as trichords and dyads. The succession of dominant harmonies links this passage to the Ellington example. The emphasis on trichords in these measures as well as those that precede them, links this example to the Berg example, which will be examined below.



Example 4-6: Gershwin "Crap Game Fugue" from Porgy and Bess, measures 72-74.

Another example of a non-functional progression that is common to jazz and post-tonal music can be found in Hindemith's *Ragtime* (Wohltemperiert), within passages such as measures 35-45. This passage is at once thematic and transitional featuring consecutive subject entries, tonal ambiguity, and frequent key changes. Moreover, due to the consistent emphasis placed upon third relations and the motivic intervals of a third throughout, Neo-Riemannian progression is a logical outgrowth of the workings in this recomposition. In measures 35-37, as the subject appears in B-flat minor in the secondo part, the primo part has a series of dominant ninth chords. The harmonies are the following: B9, C9, B9, A9, G9, and F-sharp 9 (see example 4-7). The voice movement is parallel with half and whole step voice leading. The prominence of note B in the left hand, the repetition of the B9 sonority, as well as the appearance of an F-sharp dominant ninth chord suggests a centricity around B. This reading in B major suggests also that this passage ends with a half cadence. Although there is a "tonic"

and "dominant" sonority present, the stepwise root movement along with foreign chords, undermines a traditional sense of B major. Tritone substitutes are evident in this example. The C9 that prolongs the B9 chord can be read as a tritone substitute for the dominant F-sharp 9. The relationship between B major in the primo part and B-flat minor in the secondo part is a LRL relationship. This label is derived in the following manner. From B major to D-sharp/Eflat minor is a L relation. From E-flat minor to G-flat major is a R relationship. From G-flat major to B-flat minor is a L relation.



In measures 38-42, the subject is stated in C-sharp minor. The relationship between B-flat minor to C-sharp minor is a RP relationship. Meanwhile, the primo part has a series of ninth chords that are in essence a chromatic unfolding of the dominant, A-flat. The A-flat harmony is followed later by a chromatic unfolding of D-flat. Although the dominant, A-flat, is prolonged by chromatic chords leading to an altered D-flat 7 as a tonic sonority, the chromaticism ultimately undermines the feeling of C-sharp/D-flat minor. Moreover, the chromaticism creates an ambiguity of mode. Throughout the course of this progression, there is parallel half step and whole step movement. Interestingly, each of the chords in the primo part are voiced as "bitonal" chords. As a result, they have "multiple meanings" as the lowest note of each hand can also be read as the root of the chord. For example, the C9 with a lowered 5th in measure 38, can also be read as a D9 with an added sixth. In fact, it can also be read as a B-flat

9 with both a lowered and raised fifth. Another tritone substitution is to be found in the approach to the D-flat lowered 9th with both a raised and lowered 5th. The succession of chords {AM6/9, F13, and D-flat 9 (raised 5th)} can be read as an unfolding of the final sonority. The AM 6/9, which follows the A-flat dominant 13th, is a tritone substitute for the final chord. In some chords of this progression and the one that follows, an augmented triad, the motivic sonority, is embedded in the harmonies. As with the last phrase, the chordal roots of this succession of ninth chords also have Neo-Riemannian relationships. In the chart below are the chord and Neo-Riemannian labelings.

From measure 42 (beat 2) to measure 45, the subject enters in F minor in the secondo part which is followed by a modulation to A minor. The relationship between C-sharp/D-flat minor and F minor is PL (see Table 4-1 and example 4-8). The relationship between F minor and A minor is PL as well. The primo part prolongs A minor against the F minor in the secondo part with the following ninth chords: A9 with a lowered fifth; F7 with a lowered 9th and a raised fifth; and G9 with a raised fifth and a lowered 9th. An alternate reading of the A9 is an E-flat 7 with a raised 5th. The G9 chord which has both the major and minor 9th is followed by a twooctave whole tone one scale beginning on A (see example 4-9). This creates the following root movement which although prolongs A is nonfunctional in nature.

Table 4-1: Hindemith	Ragtime (Wohltemperiert), measures 38-42.
			,

Bitonal Labeling		DM/ C7	Eb/ Db7	DM/ C7	CM/ Bb7	Bb/Ab7	AM/G7	GM/F7	CbM7,#5/ Db+
Chord Labeling	E9	C9 b5	Eb9, #5	C9 b5	C7, b13	Ab 13	A6/9	F13	Db7 #5,b5
Neo-									
Riemanniar	n l	PL I	PR R	.Р	- P	L R	PL I	PL I	PL
Labeling									
m. 38		39		40		41		42	



Example 4-8: Hindemith Ragtime (Wohltemperiert), measures 38-42.



Example 4-9: Hindemith *Ragtime* (Wohltemperiert)

Nonfunctional and Neo-Riemannian progressions, such as those found in Hindemith's Bach recomposition *Ragtime* (Wohltemperiert), do find analogues in the music of Bach. Firstly, C.P. E. Bach confirms the legitimacy of third relations in the following quote: "When asked "Who but yourself would dare go directly from C major to E major?" C. P. E. Bach replied, "Anyone can and will assuredly do it who knows that E is the dominant of a, and that a minor is very closely related to C major."⁹ Moreover, Bribitzer-Stull identifies measures 26-62 in the first movement of C.P.E. Bach's Sonata in F minor (H. 173) as an illustration of what he calls the A-flat-C- E complex.¹⁰ In addition, as a further extension of the Neo-Riemannian analogue,

⁹ Matthew Bribitzer-Stull, "The Ab-C-E Complex: The Origin and Function of Chromatic Major Third Collections in Nineteenth Century Music," *Music Theory Spectrum*, Vol. 28, No.2 (Fall 2006): 167.

¹⁰ Bribitzer-Stull, 186.

Lewin identifies within the F-sharp minor fugue from the Well-Tempered Clavier Book 1, set

[013] traveling in Neo-Riemannian regions.

Moreover, Hindemith's use of tritone substitution is closely related to the use of the augmented sixths in Bach's music. According to Mark Ellis:

Nearly 100 works by Bach incorporate an augmented sixth; this may perhaps give the impression that the chord is a relatively common feature in his music, but it should be noted that a large number of instances are fleeting, momentary dissonances, often created through a combination of harmony and inessential notes. This is not to say that such brief instances are stylistically insignificant; in fact, they constitute a distinct element of Bach's later style, and would, in general, be uncharacteristic of any composer. As will be discussed in more detail, most of these examples are from the Leipzig years, or reflect revisions made to earlier compositions.¹¹

Ellis identifies the edited D-flat in measure 6 in the WTC F minor as a notable example.

Let us take a moment to look at an earlier example from Berg's Lulu. In measures 1005-1014, as row presentations circulate throughout the orchestra, motivic trichords appear as implied jazz extended chords, triads, and quartal/quintal constructions in the piano. The progression arises from a harmonization of a scalar line spanning from A to F, which is embellished by chromatic passing tones. During this progression, there is a shift in centricity from D to F. The harmonies in measures 1005 to the downbeat of 1011 are the following: F augmented triad; AM; B-flat augmented triad; B-flat minor 11th; B-flat major; B minor raised seventh with added sixth; F minor; A-flat 7th with a raised fifth; E7; E-flat augmented; E7 with both a raised ninth, lowered ninth, and lowered fifth; and FM7. Third relations characterize a lot of the root movement (see example 4-10). However, since augmented triads figure prominently in this passage, Neo-Riemannian labels can only be applied to a portion of the progression. In the following sequence of chords are there Neo-Riemannian relationships: B-

¹¹ Mark R. Ellis, A Chord in Time: The Evolution of the Augmented Sixth from Monteverdi to Mahler (London: Ashgate Publishing Ltd., 2010), 111.

flat minor 9th, B-flat major, B minor, F minor, and CM. The Neo-Riemannian relationships are: P, LPR, RPRP, and PLR, respectively.



Example 4-10: Neo-Riemannian progression in Berg Lulu, measures 1005-1011.

On the downbeat of measure 1011, both the piano and banjo present a principal row form with extended chord sonorities: FM7, CM9, E-flat 7, and A-flat/ G-sharp minor 7th. As seen in example 4-11, by measure 1014, the centricity moves from F major to E-flat major. Unlike the previous passage, there is a discrepancy between the chordal root movement and the bass line. Pedals B-flat, D, and G work against the E-flat major centricity. It is as if the bass line has switched places with an inner voice. Below in example 4-12 is a modified Schenkerian chart showing the interaction between the fundamental bass line and the bass voice.

During measure 1014, there is a sense of tonally directed movement. However, in the next measure, as predominant harmonies and the mediant follow the dominant seventh, this sense of direction is lost. Additionally, the E and F-sharp dominant extended chords obscure the sense of a conventional cadence as well as the seventh in the bass. Neo-Riemannian relationships are found between the following chords: G-sharp minor 7th and E-flat major 7th; D minor 7th and B-flat major; B-flat major and C minor; and A-flat major 7th and F minor 7th. The labels are the following: RLP, L, RLR, and R, respectively. This ragtime section closes with a series of diminished seventh chords (example 4-13).



Example 4-11: Simultaneities in Berg Lulu, measures 1011-1017.

Interaction between fundamental bass line and the bass voice in Berg's Lulu measures 1014-1017



Example 4-12: Modified Schenkerian graph of Berg Lulu, measures 1014-1017.



In the opening measures of Bolcom's "Rag Inferno," the relationship between perceived jazz extended chords and Neo-Riemannian progressions can be observed. In measures 1-5, with the exception of two chords, the opening progression of Bolcom's "Rag Inferno" consists of dominant extended chords (see example 4-14). Although the opening chord and signature suggests C, the ensuing chords do not establish a tonality. In the root movement there are third

and tritone relations. Some chords share as many as two common tones. However, the leaps in the voice leading prevents this progression from adhering to Neo-Riemannian seventh chord transformations.¹²



CM Eb7(b9) Ab13,4 D7 #9 G13,4 Db7(#9) F#13,4 G#dim9 C7(#11) E7 (b9) Example 4-14: Bolcom "Rag Inferno," measures 1-5, from the *Twelve Etudes*.

In measures 6-10, there are also third and tritone relations in the bass line movement. In this passage, just as with the Berg example from *Lulu*, there is a discrepancy between the root and the bass line as many of the chords are in inversion. In measures 11-15, on the other hand, most of the chords are in root position (see example 4-15). As seen below, the omission of extended and altered chord members, yields an almost continuous Neo-Riemannian progression. These Neo-Riemannian relationships between the chordal roots have been highlighted. There are instances in which there is more than one shared tone. For example, the A-flat minor 11th and A7 in measure 11, share five common tones. However, the behavior of the shared tones is unpredictable as they often move to other voices in the adjoining sonority – lacking the parsimonious voice leading of Neo-Riemannian seventh chord transformations.¹³

 ¹² Adrian P. Childs, "Moving beyond Neo-Riemannian Triads: Exploring a Transformational Model for Seventh Chords," *Journal of Music Theory*, Vol. 42, No.2 (Autumn 1998): 181-193.
¹³ Childs, 181-193.



Example 4-15: Bolcom "Rag Inferno": a) measures 6-10 and b) measures 11-15.

Brubeck's Chorale from *Points on* Jazz is another example of how jazz harmonies and post-tonality converge. Firstly, due to the fact that the harmonic progressions in this chorale originate with the melody featured in the first movement, a brief examination of its original harmonization is in order. In measures 18-19 of this first movement, a C7 chord is followed by a C diminished 7th chord. Here, the B-flat and the C of both chords are sustained while the G and the E-natural move down a half step to the next chord. In his article entitled "Moving beyond Neo-Riemannian Triads: Exploring a Transformational Model for Seventh Chords," Adrian Childs calls the "hold two, move two by similar motion" a S transform.¹⁴ A similar voice-leading feature is also to be found in Brubeck's chorale. Measures 21-24 of the first movement end with a tonicization of E-flat minor. A conclusive tonic harmony that would have been supported by the sustained B-flat in measure 31, is undermined by the appearance of a submediant and a dominant chord in measure 32.

¹⁴ Childs, 181-193.

The harmonies featured in Brubeck's chorale from *Points on Jazz*, is both in keeping with post-tonal vocabularies and easily explained in terms of conventional jazz harmony. Many of these major-minor bitonal sonorities can be labeled as extended chords with raised ninths (see example 4-16). In fact, ninth chords predominate in this chorale – both dominant and diminished. Lowered ninths are found as well as raised ninths. On occasion raised and flattened ninths are found together such as in the G dominant sonority found on the last two beats of measure 7. In measure 8, a sequence of S transforms can be found.¹⁵ As A-flat and E-flat are sustained in the soprano and alto voices, the parallel tenth movement of the tenor and bass create the following sonorities: Am with lowered 5th and raised 7th, B with an added 6th and raised 9th, C with an added 6th and raised 9th, and D diminished with a flattened 9th. The parsimonious movement between those harmonies create the following S transforms: S4(3), S4(4), and S4(3).



Example 4-16: Brubeck Chorale from Points on Jazz, measures 1-16.

Promissory Notes

Promissory notes are individual pitches which acquire motivic significance in a given piece. These pitches assert their independence, often threatening the conventional tonal pitch

¹⁵ Adrian P. Childs, 181-193.

organization. Cone's promissory notes are often in conflict with competing pitches as well as chromatic alterations of themselves. In his article, "Schubert's Promissory Note: An Exercise in Musical Hermeneutics," Cone asserts that these musicological conflicts coincide with biographical narrative of the composer.¹⁶ In this study, which identifies "promissory notes" in both post-tonal music and jazz, the notion of the "promissory note" is modified. Here the concept of a "promissory note" is loosely applied to an individual pitch(es) which acquire structural significance through repetition, alteration, and harmonization. The concept is divorced from both the original repertoire and any biographical connotations. Moreover, in the nineteenth century music that Cone studied, the promissory notes were an expression of the chromatic harmony and linear counterpoint that defined the style period. As noted by Martha Hyde, there is a prevalent imitation and dialogue with the nineteenth century among twentieth century composers. In her discussion of how vestiges of Schubert's harmonic language arise in Schoenberg's twelve tone row recomposition of the Third Quartet D. 804, Hyde maintains: "Schoenberg's twelve tone method both challenges and is challenged by Schubert's tonality."¹⁷ Within this paradigm which engages post-tonality, jazz and counterpoint, promissory notes are apart of the harmonic language of both post-tonality and jazz.

In Debussy's *Golliwogg's Cakewalk* (1908), a C-flat is introduced in a static environment prolonging E-flat harmony. Roberts asserts regarding the foreign C-flat in the opening melody and later accompanimental figures:"...[it is] the appearance of a 'blue note' in the harmony---the lowered submediant used in the major mode."¹⁸ The C-flat is certainly a borrowing from E-flat minor. However, it is not by definition a true "blue note." Note C-flat is

¹⁶ Edward T. Cone, "Schubert's Promissory Note: An Exercise in Musical Hermeneutics," *19th-Century Music*, Vol. 5, No. 3 (Spring 1982): 233-241.

¹⁷ Martha M. Hyde, "Neoclassic and Anachronistic Impulses in Twentieth Century Music," *Music Theory Spectrum*, Vol. 18, No.2 (Autumn 1996): 230.

¹⁸ Roberts, 54-57.

not included in either the E-flat blues scale or the G-flat blues scale. Nonetheless, in the absence of a G-flat that would confirm either E-flat minor or its relative major key, the C-flat is an intruder in the key of E-flat major. Especially, in the opening measures where it sounds particularly dissonant in comparison to the notes around it. This lowered 6th or raised 5th which is a staple of nineteenth century harmony, also creates a lowered ninth above the dominant harmony. Moreover, this C- flat behaves like a "promissory note" - finding its full expression in the impending key of G- flat. The tension caused by C-flat intensifies in measures 10-12 as it temporarily works against the harmony until its resolution to C-natural in measure 12 (see example 4-17). The promised key of G-flat, a third away from the tonic, is foreshadowed by a tonicization in measures 22-25 and a sustained A-flat minor over the tonic pedal. A decisive modulation to G-flat occurs in measure 47. Although in the G-flat major section the C-flat often appears as the seventh of the dominant harmony, there are times in which it is juxtaposed with C-natural. For example, in measure 63-64 the two notes combine to create inflections. Note Cnatural does appear in the G-flat blues collection as a raised fourth. In measure 77, C-natural appears in a V7 of iii harmony, F7. Upon the return to E-flat major, there is continued alternation between C-natural and C-flat.



Example 4-17: Gershwin Golliwog Cakewalk, measures 10-16.

Undoubtedly, the style of Joplin and other ragtime pianists was transmitted to Debussy via Sousa. Debussy encountered African-American music around 1900 via Parisian minstrel shows and John Phillip Sousa's marching band, which was popular among Parisians. Some ragtime works can be considered simply as syncopated versions of marches, due to the fact that ragtime bands and ragtime pianists were playing one another's repertoire continuously. As a music critic, Debussy wrote the following regarding Sousa's band:

If American music is unique for its invention of the famous 'cake walk' and I must admit that for the moment that seems to be its single advantage over all other kinds of music, then M. Sousa is unquestionably its king.¹⁹

Like *Golliwog Cakewalk*, an examination of Joplin's "Maple Leaf Rag" reveals a lowered sixth scale degree, enhanced by lowered sixth harmony, behaving like a promissory note. An arpeggiation of F-flat major, which is a borrowing from A-flat minor, first appears as in measure 5 in a deceptive cadence – as a tonic substitute (see example 4-18). This F-flat major arpeggiation is immediately followed by a downward resolution of F-flat to E-flat and an A-flat minor arpeggiation in measures 8-9. The F-flat major appears again in measures 10-11 and 14-15, preceded and followed by the second inversion of tonic A-flat major. Here, it is functioning as a harmonized chromatic upper neighbor. In both instances, note A-flat is held as common tone in the left hand while the other two chord members move by half step in contrary motion. The Neo-Riemannian relationship between the F-flat major and A-flat major triads is LP.





¹⁹ Davinia Caddy, "Parisian Cakewalks," *Nineteenth Century Music*, Vol. 30, No.3 (Spring 2007): 288-317.

In measure 61, during the Trio section in D-flat major, note F-flat appears as the seventh of a fully diminished leading tone of V chord, the G fully diminished 7th. The F-flat resolves downward to the third of the dominant chord that follows. Note F-flat returns in measure 77 during the closing measures in A-flat major, as a chromatic lower neighbor to the fifth or flat 5th of the dominant of the dominant – B-flat major. In the next measure, it appears for the final time as a chromatic passing tone, E-natural, from a I 6/4 to a V6/4 of V. As E-natural, it resolves up for the first time to the sixth scale degree, F-natural.

Although there are departures in its application, Cohn's promissory note analysis yields some useful insights into the activity of the leading tone, C-sharp, and secondary leading tone, G-sharp, in Powell's "Tempus Fugue It." Note C-sharp/ D-flat occupies dual roles as a properly resolved leading tone and as a non-resolving seventh in the tonic sonority. There is also tension between C-sharp and C-natural, the lowered leading tone. Note A-flat/G-sharp behaves both as a secondary leading tone which resolves to the dominant, A7, and as a lowered fifth of the tonic sonority. The tonic sonority is a D minor raised 7th chord, whose variants include a D7 chord and a D7 with a lowered fifth.²⁰

In the pick up to measure one, there is an arpeggiation of a D minor extended chord with a raised seventh and a major ninth – the tonic sonority (see examples 4-19 and 4-20). Its identity as the tonic sonority is confirmed later, in measures 27 and 161. In the first full measure that follows the pick up, the arpeggiation of the D minor harmony continues – this time including a lowered seventh, C-natural. This note C-natural initiates conflict as a competing seventh scale degree. However, instead of note C-natural proceeding to the tonic, it resolves downward to B-flat of the next chord, G minor, via a chromatic passing tone, C-flat. In measures 3-4, the notes G-sharp/A-flat and C-sharp behave in expected ways with the former

²⁰ The minor raised 7th chord is also significant to works across this paradigm.

appearing as a passing tone and the latter resolving to D (see example 4-21). In measure 6, however, the expected resolution of the third from an A7 with a lowered fifth to note D of the tonic chord is blocked by the appearance of D-sharp. Note D-sharp is a lowered ninth of the coming D7 lowered fifth sonority. In measure 7, G-sharp appears as A-flat, the lowered fifth of the D7 tonic sonority. Instead of resolving to an A-natural, G-sharp resolves down to a lower octave G in the next measure – the root to the coming G minor 7th chord. Also in measure 7, a C-natural appears again as chord member in the tonic sonority, D7 flat 5, in the absence C-sharp.



Example 4-19: Powell "Tempus Fugit" (introduction).



Example 4-20: Sketch of pick up to measure 1, Powell "Tempus Fugit."



In measures 9-12, the primary leading tone resolves in expected ways. In measures 13-14, however, note C-sharp is sustained through an A7 arpeggiation, as well as, the D minor arpeggiation that follows. In measures 14-15, G-sharp truly behaves as a secondary leading tone in the chord change from E7 to an A7 flattened fifth.

In measure 24, G-sharp appears in a scalar figure that leads into a new section. In light of the other occurrences of the tonic sonority, it is being read as part of a filled in arpeggiation of the tonic sonority – D minor 7th lowered 5th harmony – rather than as a chromatic passing tone. In measures 26-27, excluding a C13th chord, note D-flat/C-sharp is sustained without resolving (see example 4-22). In measure 28, G-sharp/A-flat is maintained as a common tone before resolving downward to note G, the seventh of the A7 chord with a raised fifth. In the measures following, A-flat appears again as the lowered fifth of the D9 lowered 5th chord, resolving to the root of the G minor 7th chord.



Example 4-22: Powell, measures 26-28.

In measures 42-43, A-flat is sustained as a common tone between a D9 with a lowered fifth and an A-flat 9th, before resolving downward again to a G 9th with a raised 11^{th} – continuing to defy its role as a secondary leading tone to the dominant A7. Also in measure 43, the primary leading tone is spelled as D-flat, functioning as a raised 11^{th} in the G 9th chord. Synchronously, D-flat alternates with its competitive leading tone, C-natural. Instead of resolving to the tonic sonority, D-flat/C-sharp is enveloped by a chromatic descent in the right hand. This chromatic descent leads into measure 47 in which C-natural appears as a raised ninth to an A7 with the C-sharp absent. In the absence of the third of the chord, note C-natural continues to contradict the true leading tone. Note C-sharp, however, does appear again in the next measure in a filled-in arpeggiation of the tonic sonority. The A7 lowered 5th chord that follows is again missing the third. The third does not appear again until measure 52. Nevertheless, the third is not without its contender as a C-natural appears over the dominant pedal.

During a prolongation of A7 flat 5 in measures 87-89, C-natural, the raised 9th, is reiterated continuously in the descending scalar gestures. This phenomenon also happens in measures 111-115. In measures 91-94, however, the leading tone is resolved as expected. In measure 95, note A-flat appears in a chromatic lead-in, resolving downward into the seventh of the approaching A7 chord – again not behaving as a secondary leading tone. In measures 101-102, the ambiguity of the primary and secondary leading tone continues as they appear in the descending figures {F-sharp, D, D-flat, C} and {D, B-flat, A, A-flat} over a D pedal (see Example 4-23 below).



Example 4-23: Powell "Tempus Fugit," measures 101-102.

In measure 105, the primary leading tone appears as a lowered fifth of a G7 arpeggiation which is followed by a D minor 6th.

For almost the entirety of the final six measures, C-sharp is sustained throughout the chord changes. There is one exception in which the seventh of E7 resolves it. Meanwhile, A-flat is strangely absent. It, however, appears in the final D minor raised 7th chord as a lowered fifth – a member of the tonic sonority.

"Blue, Blue, Blue" from Gershwin's *Let 'Em Eat Cake* provides an example of promissory note activity. A conflict between F-sharp and F-natural becomes a microcosm of a larger conflict between the competing keys of G major and C major. The tonality of the opening passage is ambiguous. The introductory measures suggest G major while the presence of note C as the eleventh of the G9 suspended chord is very strong. The vocal entrance is ushered in by a C9 – suggesting centricity in C. However, this centricity in C is undermined by the root movement which is by thirds. On the other hand, the vocal and harmonic iterations of F-sharp are suggestive of a centricity in G. In fact, the possibility of G as the tonic key holds sway through measure 13 in spite of the fact that its tonic chord is not heard again until measure 12.

In the first introductory chords, G9 sus and E-flat 9 sus, note F-natural is a chord tone. The conflict ensues between F-sharp and F-natural as note F-sharp is sustained as a one note recitative in measures 3 through 7 (see example 4-24). Additionally, note F-sharp behaves as an unresolving leading tone for the phantom key of G. Moreover, the conflict intensifies with the third chord, a F-sharp dominant 9th chord. The F-sharp dominant 9th chord functions as a substitute for D7 and the F-sharp half diminished seventh chord. Meanwhile, F-natural is woven into the chromatic lines of the accompaniment. As note F-sharp is sustained in the vocal F-sharp 9} vamp repeats, the function of F-sharp changes from a lowered fifth or raised eleventh of C9 to a thirteen of A9 to the root of F-sharp 9. Without changing in pitch level, this note in effect is being inflected as a result of its fluctuating role in the harmony. In contrast to its occurrence in nineteenth century music, the promissory note in Gershwin is a natural outgrowth of the jazz harmonic language which consists of altered chords. In this song, as well as others in this study, Gershwin is using jazz and blues harmonic resources as raw materials in his experimentation with nineteenth century chromaticism and post-tonality.²¹ Also, in contrast

²¹ Gilbert, 147-148. "The two-measure introduction constitutes a cycle in that its four chords, of which three are distinct, collectively contain all twelve notes…Pentatonicism played an important role in Gershwin's music almost from the beginning; thus one can see a natural extension of this tendency in his use of pentatonic figures to build chromatic entities."

to traditional promissory note, Gershwin's promissory note is clothed in syncopation as seen in measures 5-6.

Meanwhile, in the accompaniment from measures 3-7, F-sharp alternately resolves down to F-natural and up to G, the seventh of the A9 chord. The F-sharp "resolving" down to F-natural can be alternately read as a sequential pattern begun with the C9 in which the thirteenth is followed by a raised 5th. Both the thirteen and the raised 5th can be read as chord members, thereby negating any sense of resolution.



Example 4-24: Gershwin "Blue, Blue, Blue," measures 3-4.

On the downbeat of measure 8, following the D7 chord from the measure before, the F-sharp of the vocal line gives way to an inner voice accompanimental resolution down to the F-natural of an E-flat 9 chord serving as a tonic substitute – thereby thwarting the expectation of resolution to a G major chord. However, this inner voice resolution is in fact misleading as both F-sharp and F-natural appear once more on the second beat of the E-flat 9 harmony. If the F-sharp is counted as a chord member then it coexists as a raised 9th along with the flattened 9th of the E-flat 9th chord. Meanwhile, in measures 8-9, in the alto line, a chromatic line ensues between F and B-natural a diminished fifth below. Between measures 9 and 10, the F-sharp, a flattened 5th of the C9th chord resolves to G in the E-flat 9 chord. However, this appearing "resolution" is not authentic since both the F-sharp and F-natural appear on the second beat of the Second beat of the E-flat 9th chord as coexisting chord members. It is finally in measure 12 that F-sharp

resolves to sustained G major harmony in measures 12-13. Due to the ambiguity throughout, the sustained G major harmony at the end could be read two ways. On one hand, it could be read as a confirmation of a centricity in G major. On the other, it could read as a confirming the dominant for the key of C major. Both readings reveal a consistent avoidance of the dominant of both keys. However, in the coming refrain which is more conventionally tonal, both the D7, representing note F-sharp, and G7, representing note F-natural, play a major role.

Similar to the first section, the leading tone is highly emphasized during the refrain in C major. In measure 15, while appearing as a 13th over the V of V chord, B is sustained and not resolved. Instead of resolving upward to the tonic above, there is a chromatic descent via G-flat. Note G-flat (F-sharp) and its competitor F-natural are woven into a chromatic line supported by a G7 chord. The same happens again in measure 18, 28, and 30. In measures 21 and 33, F-sharp receives emphasis at the midpoint of the phrase as a constituent of a sustained D major, V of V. In the connecting passage, however, found in measures 22-25, F-natural prevails, reinforced by repetition and syncopated rhythms. In measure 33, F-sharp appears for the final time, finally resolving to a C chord over a G pedal. In the final measure, F-natural has the final say as an F major chord appears as an upper neighbor harmonization of the tonic C major.

Throughout Gershwin's "Mine" from *Let 'Em Eat Cake*, there is a conflict between notes C-natural and C-sharp. This conflict is an outgrowth of an ongoing struggle between the key of C and the major key of its potential usurper, the added sixth. Hence, the competing key of A major, is signaled throughout by the presence of its third scale degree, C-sharp. This emphasis on the added 6th as well as third related tonalities in general is consistent with other Gershwin examples in this study. The conflict between notes C-natural and C-sharp is introduced by the primary melody's ostinato accompaniment which features a C6 followed by an A7 raised 5th chord (see example 4-25). The A7 raised 5th chord along with the melodic line's prolongation of A minor, creates the sense of an A minor/major being superimposed upon a harmonic progression that is largely in C major. It is not quite an instance of bitonality, because the melody and the accompaniment are not harmonically autonomous. After the second phrase, in which both the melodic line and the progression are transposed up a fifth and down a fourth, respectively; the first phrase returns with an added C-natural in the melodic line – confirming a melodic centricity in A minor. Synchronously, C-natural and C-sharp continue to alternate in the harmonic accompaniment which consists of {C6- A7 (raised 5th) - D7 – G7 (raised 5th)} in an even more rapid ostinato.



Example 4-25: Gershwin "Mine," measures 1-5 (piano reduction).

During the return of the second phrase, there is a chromatic descent woven into the inner voices, which falls short of an octave – spanning from A5 to C-sharp 4. The chromatic descent is doubled two octaves below from measure 25 to the downbeat of measure 27. This chromatic descent which culminates on note C-sharp is followed by a D minor 9th chord which serves as predominant for a cadence in C major. The eventual triumph of C major over its "added sixth usurper" is confirmed even more by the appearance of an Am7 lowered 5th on the turn-around leading to the second refrain.

A repeat of the refrain includes a countermelodic phrase featuring C-sharp and

C-natural side by side in measure 40 (as seen in example 4-26 below). This occurs again in measure 56 as the harmonic accompaniment retains both notes in alternation.



Example 4-26: Gerswhin "Mine," measures 37-40 (piano reduction).

The final appearance of C-sharp occurs in the closing measures beginning in measure 60. It appears in an unaltered A7 as part of a circle progression, $\{III-VI-ii9-IV6-V11-I\}$, concluding decisively in C major. During the first ending of this final refrain, the turn-around encountered earlier in the measure before the second refrain appears a second time in confirmation of C major's supremacy.

Milhaud's *La Creation du monde* features blues inflections of the third and seventh scale degrees of D minor that acquire motivic significance and behave as promissory notes. This example suggests an expansion of the promissory note definition to include the inflected notes of the blues.²² Inflected notes are indeed in conflict with one another. The dissonance generated by inflections are appreciated within the blues idiom for their own sake. The way "blue notes" create tension and interact with tonality is apart of their very essence. They are said to be promissory notes within this example because they acquire a significance within the movement that transcends the realm of a mere "blues style" ornament. Notes C/C-sharp and F/F-sharp conflict with one another both melodically and vertically between voices. This example of promissory notes also has a contrapuntal component. For example, in the opening

²² The notes of the D expanded blues scale are the following: {D E F F-sharp G G-sharp A B C-natural D}.

measures, the F-sharp and F-natural are exchanged between carriers of the fugal subject and the piano accompaniment (as seen in example 4-27 below).



Example 4-27: Milhaud, La Creation du monde, measures 5-6 (piano and contrabass).

Likewise, in the passage beginning in measure 14, the C-sharp/C-natural inflection is circulating in continuous imitation throughout the texture between all the voices, including the piano accompaniment. In measure 18, the trumpet enters with the subject centered on C, while F/F-sharp and C/C-sharp inflections continues to permeate the texture. The key choice of C major intensifies the motivic inflection of C-natural and C-sharp. In measure 24, the piano accompaniment becomes chordal and more conventionally tonal, outlining primarily linear progressions within the key of C major (see example 4-28). After the initial I to V, there is a linear bass descent from V back down to I. Mawer identifies C Ionian as the prevailing mode.²³ However, a centricity on C with scalar material that is consistent with the key of G major, seems better described by a C Lydian label. The presence of C Lydian's F-sharp both contradicts the expectation from the earlier section of C major and displaces as its rival Fnatural. It is also in the passage that promissory notes delve into the realm of pc sets, as conflicting notes are embedded into a motivic set. Mawer identifies the notes of the oboe line in measures 24-25, for example, {D, C-sharp, C, A}, as this movement's main figure and motivic set [0125].²⁴

²³ Mawer, 157.

²⁴ Mawer, 157.



Example 4-28: Milhaud, La Creation du monde, measure 24.

The F-sharp/F-natural conflict resurfaces in measure 24, as D major and D minor triads are being played simultaneously in the violins. This instance confirms that promissory notes also participate in bitonal sonorities and key structures.²⁵ There are two concurrent realms of centricity as chordal progressions and bass lines in C contrast with the trappings of D centricity.

²⁵ Although bitonality is a controversial concept, which suggests the simultaneous hearing of independent keys rather than complex simultaneities; this terminology is useful to this study. The term "bitonality" implies contrapuntal relationships. On the other hand, the hearing of complex simultaneities opens up the realm of pitch class sets. Both approaches suggest the onset of musical space. The outer limits of bitonality includes a counterpoint of vertical or multi-layered structures – which in spatial theories are called sound masses. Pitch class sets, on the other hand, operate within a unitary space in which the horizontal and vertical realms are equal. Hence, the use of the term "bitonality" facilitates a focus on the horizontal and contrapuntal aspects of a complex simultaneity.

CHAPTER 5

MOTIVIC CONVERGENCES: JAZZ LICKS/INFLECTIONS

Post-tonality, jazz, and Bach inspired counterpoint are musics that are steeped in

motivic variation. The episodic development of motivic cells is readily observed in Bach

counterpoint. In post-tonal music, these motivic cells are called pitch class sets. In jazz, they

are often called "licks." P.N. Johnson-Laird states the following regarding "licks":

One view of jazz improvisation is that musicians string together a sequence of motifs – "licks" as they used to be called – modified to meet the constraints of the chord sequence. As Ulrich (1977) wrote: "Sequences of motifs are woven together to form a melody. Rather than constantly reinventing new motifs, the musician modifies old ones to fit new harmonic situations." A similar idea underlies Levitt's (1981) program for improvising jazz melodies. And there are books containing sets of licks for neophytes to commit to memory to help them to learn to improvise. Yet, the motif theory cannot be the whole story. Someone had to invent the motifs in the first place, and in so doing they could not have been regurgitating them from memory. Musicians often reuse certain phrases, rhythmic patterns, and melodic contours, but they also play phrases that are novel... For experienced musicians, it is much easier to make up new melodies.¹

Johnson-Laird elucidates the relationships between individual "licks" and their environment. There are three points that are particularly relevant to this study. Firstly, "licks" are "woven together to form melodies. Secondly, they are modified to accommodate the demands of the underlining harmonies. Lastly, "licks" make references to other works. However, while defending against any reductive views of jazz improvisation, Johnson-Laird does minimize the importance of stock motifs to individual innovation and the music as a whole. "Licks" are not unlike pitch class sets, which are indeed "strung" together to form larger structures. They can also, by alteration, give rise to or be combined with new ideas. Such appropriation of licks is an

¹ P. N. Johnson-Laird, "How Jazz Musicians Improvise," *Music Perception: An Interdisciplinary Journal*, Vol. 19, No. 3 (Spring 2002): 430.
integral part of the tradition. For example, Earl Hines' made the following comment regarding

his creative interaction with Louis Armstrong:

We were very close and when we were playing we would steal ideas from each other. Or, rather, I'd borrow an idea from him and say 'Thank you.' Then he'd hear me play something he liked, borrow it, and say, 'Thank you.' A lot of people have misinterpreted the whole thing and said that I just got my style from Louis, but I was playing it when I met him."²

Jeffrey Taylor elucidates the seeming paradox of innovation and borrowing –thereby providing additional insight into the purpose and function of "licks" in individual works and the style as a whole. In reference to Hines' intriguing comment, Taylor states:

I think this passage points to an intriguing paradox in the way Hines—and perhaps, jazz musicians in general—view the concept of influence. Jazz musicians do not consider 'borrowing ideas' and 'being influenced' the same thing. I would suggest that they see their craft as two different processes: one is the spontaneous unfolding of ideas, combining a largely aurally learned language with a fertile imagination; the other involves the insertion of musical fragments used before, either by the artist himself or by those he had heard. These fragments (or 'licks' in the vernacular of the musician) do not necessarily signal lapses of imagination or a dearth of ideas, although some performers have used them that way. The use of preexistent fragments at specific points in a performance can provide unity. It can give the listener a comfortingly familiar contrast to a complex passage. And jazz musicians may relish the brief sense that the insertion of a certain lick—one that is solidly under their fingers—can provide in the context of an especially daring improvisation.³

As stated earlier, jazz motifs operate in ways very similar to motifs in post-tonal music and Bach counterpoint. "Licks" are self-contained units or cells that are repeated, altered, fragmented, inverted, combined and expanded. At times, however, these variation processes are expressed in ways that are unique to the jazz style. The fundamental difference between a motive and a "lick" is that a "lick" articulates the pitch materials of jazz-blues as well as the

² Jeffrey Taylor, "Earl Hines's Piano Style in the 1920s: A Historical and Analytical Perspective," *Black Music Research Journal*, Vol. 12, No.1 (Spring 1992): 61.

³ Taylor, 62.

idiosyncrasies of the jazz-blues language. Included among those idiosyncrasies are syncopation, dotted rhythms, articulation, phrasing, note bendings or inflections, glissandos, and motivic thirds/sixths.

Just as with any motive regardless of style, rhythm is an integral part of the jazz "lick" profile. Proto-jazz and jazz are often associated with characteristic rhythmic patterns such as the dotted eighth rhythm and its inversion, the Scotch snap.⁴ The Scotch snap and dotted rhythms pervade post-tonal references to ragtime, jazz, and the tango. Moreover, these rhythms are readily observed in the Bach recompositions of both post-tonal and jazz composers. In many Bach recompositions, such as those by Loussier and Hindemith, the original material is made to conform or suit the elements of jazz-blues melody and motif.

Additionally, jazz licks and inflections, like all motives, are often agents of more complex harmonic structures and organizations. This is derived from the verticalization of jazz licks and inflections in a technique known by jazz pianists as "crushing keys." ⁵ This pianistic technique of playing neighboring keys gives rise to major-minor and other bitonal sonorities that are commonly associated with the post-tonal idiom. Verticalized jazz licks and inflections often occur in contrapuntal contexts. The result is closely related to what is traditionally called "cross or false relation," that is"a chromatic contradiction between two notes sounded together

Krin Gabbard: 'Jazz,' In Grove Music Online. Oxford Music Online,

⁴ Carol Lems-Dworkin, *Africa in Scott Joplin's Music* (Evanston, IL: Carol Lems-Dworkin, 1991), 22. The term of "proto-jazz" has been borrowed from Krin Gabbard.

http://www.oxfordmusiconline.com/article/grove/music/jazz (February 2012).

In early musicological writings, such as those by Krehbiel, the idiomatic rhythms and syncopation of jazz was often attributed to the Scotch snap. In *Africa in Scott Joplin's Music*, Carol Lems-Dworkin asserts that the so called Scotch snap has no origin nor is widespread in Scotland. However, she does identify the prevalence of the "Scotch snap" in African music and music of the African diaspora. Moreover, Dworkin asserts that the rhythms of dances in the African diaspora are often interchangeable. She states: "Even though the cakewalk, tango and habanera use entirely different dance steps, they nevertheless share the same basic, underlying rhythm, no matter whether their associated musics are fast or slow."

⁵ Mark C. Gridley and Wallace Rave, "Towards Identification of African Traits in Early Jazz," *The Black Perspective in Music*, Vol. 12, No. 1 (Spring 1984): 53.

or in different parts of adjacent chords."⁶ These verticalized jazz licks and inflections, which also occur in contrapuntal contexts, are usually motivic in nature, related to a larger structural organization.

Ellington's *Concerto for Cootie* is like a lexicon of jazz motivic development as motivic cells or "licks" are subjected to fragmentation, inversion, expansion, dimunition, and augmentation. The pitch material is drawn initially from the F expanded blues scale: {F G A-flat A B-flat B C D E-flat F}. The first theme is created by the elision of repetitions of motive x (see example 5-1 below). Motive x appears in its unaltered form in measure 15. It consists of notes {C, B-flat, G-sharp, A}, outlining a minor third. Motive x is first introduced by its variant {B-flat, G, G-sharp, A} in measure 1. The variant is derived from an omission of the first note as well as the interpolation of an additional note, G-natural. This variant, although occurring first, is revealed as such by its lack of consistency in repetition as compared to the other form that includes first note C. Each one's emphasis on the minor third along with the inflection of note G in the variant are the defining characteristics that identify this motive as a jazz "lick" or a carrier of the jazz style. In addition, motive x is varied rhythmically with dimunitions in the form of triplets.

In measures 1-3, the first melody is answered by variants of the x motive in the trombones (see example 5-2). The first trombone's answer, which also starts on the C, has been partially inverted – going up a second and then a third. The second trombone's answer, which begins on A, is completely inverted going up a second, a major third (consistent with the original), and then down a half step. The third trombone, starting on F, retains the G-sharp and

http://www.oxfordmusiconline.com/article/grove/music/cross relation (February 2012).

⁶George Dyson: 'Cross Relations,' In *Grove Music Online*. Oxford Music Online,

The verticalization of pitch inflections, "crushing keys," and cross relations are all related to jazz's chord-scale compatibility principle as well as Schoenberg's theory of musical space. This will be explored in greater depth in this study.

A from the motive – outlining a third. In measure 3, the motivic third is also reflected in the first trombone leap of a minor third from C to E-flat in measure 3.



Example 5-1: Ellington Concerto for Cootie, trumpet solo measures H-6 and measures 14-17.



Example 5-2: Ellington Concerto for Cootie, trombone answers, measures 1-3.

In measures 14-16 of the trumpet solo, motive x cycles through metrical placements. Five measures later in the trumpet line, motive x is expanded by arpeggiations of the F major/F minor triad, which will be called extensions. The extension's alternate arpeggiation of F major and F minor in measures 21- 23, represent an inflection of note A (see examples 5-3 and 5-4). The extensions are also subject to rhythmic variation. On first hearing, it sounds as if a new melody has been introduced. However, an embedded motive x remains intact. In measures 24-26, amidst syncopation and triplets, motive x and its extensions alternate.



Example 5-3: Ellington Concerto for Cootie, trumpet solo measures 21-23.



Example 5-4: Ellington Concerto for Cootie, trumpet solo measures 21-23 and 46.

In measures 41-47, with a key change to chromatic mediant D-flat major, a new melody is introduced which consists of the alternation of a y motive and extensions. The y motive consists of stepwise motion, a lower neighbor motive, and a leap that is at times expanded or inverted (see example 5-5 below). The extensions alternate between skips and stepwise movement. Triplets are a defining characteristic of both the motive and its extensions. There is an unusual variant of the y motive found in measure 43 where the E-flat has been removed and the rest seems arbitrarily shuffled. It is labeled as the y motive because of its starting note, general contour and the defining leap. This variant is an example of how sometimes jazz motivic variation departs from that of Western art music.



Example 5-5: Ellington Concerto for Cootie, measures 41-47.

The fugal melody from Milhaud's *Creation du monde* comprises of a string of three motives and their variants. The pitch material of the opening is drawn from the D blues scale: {D E F F-sharp A A-sharp B C D}. The motivic construction of Milhaud's fugal subject and

countersubject invokes both jazz melodic and Bach fugal subject constructions. As seen in example 5-6, the motivic building blocks or "licks" of the subject as found in the opening cello line consist of the following: a unidentified fragment, a neighbor "lick" (NB) that centers on the tonic then dominant scale degrees; three motives that outline a third (3A, 3B, & 3C); and chromatic trichord "lick." The neighbor note "lick" is redolent of note bending in the blues. The motivic third motives include a dyad (3A), a dyad plus a note inflection (3B), and a filled in third (3C).





These minor third "licks" also emphasize scale degrees three and seventh which are continually subjected to inflection throughout the work. The chromatic trichord "lick" here features a both the major and minor seventh scale degrees of the key anticipating the dominant bebop scale of the next generation. Undoubtedly, double seventh gestures existed long before the bebop era. The first two "licks", NB and 3A, combine to form a figure that is varied and expanded with each repetition. There are three repetitions of the figure in all. By the third repetition, the cello has moved from the bass to the treble range. The third variant is created by repetition of the motivic third and a tail extension consisting of double sevenths. The character of the third variant is in keeping with the blues consequent phrase that provides closure to the repeated phrase before it. The "licks" are also defined by their articulation, rests, and rhythms. The "licks" in this fugue share some of the same defining rhythmic characteristics of other "licks" encountered in this study including syncopation, dotted rhythms, and triplets.

Moreover, groupings of three notes and trichords emerge from this fugal theme. The trichords present in this theme are consistent with the trichords Jeff Pressing identifies as being prevalent in jazz. Notes {D, E, F}, from the first two licks, comprise an inversion of set [013].⁷ Notes {F-sharp, F, D}, from lick 3B, is an inversion of set [014], which is associated with Oscar Peterson's blue lines.⁸

Concurrent with inflections of the third scale degree, F, in the cello line is the same inflection in the piano part. For a brief moment in measure 4, there is a cross-relation between the two parts, as the cello's initial third motive appears without inflection. Afterwards, the inflection goes back and forth almost imitatively between the parts. This happens again in measure 9 with the entrance of the subject in E minor. The cross-relations in measures 4 and 9 are foreshadowings of more to come. In this work and others in this study, cross relations reveal themselves to be vertical manifestations of note inflections.

Each fugal subject entry in a different key calls draws upon the expanded blues scale in that key, including the Em, Am, and Cm as found in measures 9-23. The countersubject in measures 9-18 of the contrabass line consists of a "stringing" together of largely motivic third motives along with extensions and interpolations.





⁷ Jeff Pressing, "Pitch Class Set Structures in Contemporary Jazz," *Jazz Research* 14 (1982): 134.

⁸ Pressing, 134.

Synchronously, there is a free counterpoint of ascending third gestures, echoing and overlapping the countersubject in the trombone. Beginning in measure 16, as a result of increasing overlap, reversals of the note inflection, and the entrance of additional instruments, the cross-relations begin to occur throughout the texture. Measure 19 is a prime example of this phenomenon.

In measures 52-53, the motives are in counterpoint and appearing in various combinations (see example 5-8 below). Accents at times aid in the differentiation between motives. However, there is some overlap between figures. The neighbor motive has been inverted and altered intervallically. The neighbor motive has also been subjected to rhythmic variation. "Lick" 3C is subjected to dimunition appearing in parallel ninths between the clarinet and cornet. The 3C figure in the clarinet and cornet also features a hemiola with a 3:4 ratio. In other works in this study, such as the Davis and Gershwin examples to come, there are similar "licks" with this same hemiola effect. Following the 3C motive in the clarinet and cornet lines is the chromatic trichord motive in contrapuntal overlap cast in the characteristic rhythms of ragtime.⁹ The cornet has an inverted form of this motive. Other variants of "lick" 3C include a retrograde in the bassoon line as well a trombone glissando that combines 3B and 3C.

⁹ Berlin, Edward A.: 'Ragtime,' In *Grove Music Online. Oxford Music Online,* www.oxfordmusiconline.com/ragtime (accessed August 11, 2012). In the article, the rhythm of an eighth-quarter-eighth is identified as prototype b.



Example 5-8: Milhaud La Creation du monde, measures 52-53 (reduction).

In Miles Davis' "Israel," "licks," like all cells of notes, are repeated, altered, combined and expanded. Following the introductory measures, the ensemble's rendition of the "head" tune in measures 9-20 has the character of an improvisation woven from "licks" and meaningful silences. These "licks" are also syncopated and harmonically driven. Initially, the pitch materials draw from the C minor pentatonic, {C, E-flat, F, G, B-flat, C} with D as an outlier. Note D evokes both the expanded C blues scale as scale degree 2;¹⁰ as well as C minor 9th harmony, a staple of the "Birth of Cool" sound. In this study, the motives are decided based on general contour and ending notes (see example 5-9). Motives a^{11} and b articulate a C minor 11th, which is a significant harmony in this piece. The first motive *c* encountered is a variant of the complete motive which appears in measure 10. The defining characteristic of motive c is a downward contour that spans from G to C. The complete motive, which is a filled in descent

¹⁰ C expanded blues scale: {C D E-flat E F F-sharp G A B-flat C}.

¹¹ Pressing, 136. Motive a consists of notes {D, E-flat, F}, set [013], which is included in Pressing's taxonomy of jazz trichords. The rest of the motives in this Davis example consist of four or more notes.

from G to C, is subject to various alterations. Moreover, each occurrence of the motive is characterized by a metric shift.¹² In the variant encountered in measure three, the intervallic content has been altered. The last note is omitted resulting in the arpeggiation of a GM7 with a raised 5th. The harmony is an embedded set of HEX 2.

Motive *b*, {C, B-flat, G, F}, is repeated in rapid succession in measures 5-6. Although it is not a hemiola like the Milhaud example (m. 52-3), its syncopation resonates with that passage as it cuts across down beats and barlines. Just as in the Milhaud example, immediately after the statement of the first few notes, they are repeated and embellished by interpolation. The first four notes from this Davis example, in measures 5-6, belong to set [0257]. This gesture is answered by the baritone sax's descending double seventh dominant/major bebop scale.



Example 5-9: Davis "Israel" measures 1, 3, and 9-20.

¹² As demonstrated by this example and others in this paradigm, repetitions of "licks" also include a metrical shift.

In measure 9, "lick" c appears in an altered form as notes F and G are reversed. This variant is an example of how the variation processes of jazz diverge from those of traditional Western music. Its notes {F, G, D, C} articulate the underlining C minor extended harmony. In addition, embedded in this "lick's" collection of fourths is what Pressing identifies as a Category One trichord, set [027].¹³ Immediately following this variant is the original form of motive c elided with two repetitions of motive b (refer to example 5-9). These repetitions of motive b are elided together as well, with note C omitted from the second repetition in measure 11. The second repetition is also embellished by the interpolation of note D. During this repetition of motive b, the harmony vacillates between C major/minor and G7. In measure 11, note B-flat creates a cross-relation or raised ninth over the G7 which is quickly followed by a C minor 7th. The coexistence of B-natural and B-flat in this simultaneity constitutes a vertical inflection of the seventh scale degree in the tonic key of C minor. This reading is supported by the melodic and harmonic alternation between B-flat and B-natural in measures 1-5 as well as the descending double seventh scalar line found in the baritone sax in measures 7-8. A new "lick", motive d, appears in measures 12-13, ascending from G to F. In the next measure is an altered c+b gesture. Again, this combined gesture has been shifted metrically. Also, the first note of motive c has been omitted. The combination of the two "licks" is a descending line spanning from F down to G below. Thereby, the c+b "lick" has a retrograde relationship with "lick" d in measures 12-13. In measures 15-16, a variant of motive c appears. It has the same notes as the measure 9 variant, {G, F, D, C}. However, the order has been rearranged and the contour altered. This gesture is embellished by an octave displacement and interpolation of an eighth rest. Following motive c in measures 15-16, is an interpolation consisting of an

¹³ Pressing, 134.

arpeggiation of fourths set [027].¹⁴ This arpeggiation happens over the tritone substitute for the tonic C minor – G-flat major 7th. Here, the triplets form a 6:4 hemiolic ratio with the pulse similar to the three note groups in the Gershwin fugal and Milhaud examples. Moreover, the seventh scale degree is inflected as the harmony moves from D flat 6/G to G7. This section ends with another c + b "lick" with the last note replaced by a chromatic neighbor.

Examples of cross-relations can be seen in measures 23-32. There is harmonic tension between F, F-sharp, and G at a point of convergence highlighting a G dominant seventh with a raised fifth. The tension of between F and F-sharp recalls the presence of both pitches in measure 19. Also in measure 23, there is a harmonic tension between B-flat and B-natural. The presence of the B-flat can be read as a raised 9th.

Stravinsky's *Ebony Concerto* features jazz licks which articulate pitch class sets as well as partake in contrapuntal activity. In the opening measures, a jazz lick articulating set [013]¹⁵ is found in the tenor and baritone saxophones with its centricity in F minor. There is a little heterophony happening between the two voices. This takes place over a F pedal in the piano and trombones. The harmonies of the horns and piano are F minor. The three-note cell quickly becomes a five-note gesture [01346] in measures 5-6, which is imitated by muted trumpets in a higher register (see example 5-10). The motive is growing additively over time. For the most part, the trumpet entrances are accompanied by a pseudo-walking bass line in the harp. In measure 8, the tenor and baritone sax picks up the three-note gesture again which has been altered by a half step becoming [01246].

 ¹⁴ Pressing, 134. Set [027] is a Category One trichord in Pressing's taxonomy of pitch class sets operative in jazz.
¹⁵ Pressing, 134.



Example 5-10: Stravinsky *Ebony Concerto*, mvt. 2, measures 1-9. There is a slight alteration and circling about with the motive, which is in keeping with jazz improvisation. Again there is some heterophony and octave displacement in the baritone.

Suddenly, the saxes enter followed by the clarinets with a gesture that fluctuates between [025] and [013]. There is an intervallic relationship between these two sets:¹⁶

(237)	[025]
(12 9)	[013]

The staggered entrance of the clarinets with the same motive has a canonic effect.

In measures 14-16, the clarinets come in with a bluesy chromatic melody using the pentachord [01236]. In the first ending are sets [0136] and [01346] in the clarinets. The chromatic line creates the effect of bent notes. Meanwhile, they are accompanied by a walking bass line played by the harp as well as the plunger punctuations of the trombones. In measures 18-21, the brass section indulges in conflicting eighth and sixteenth note gestures. Suddenly, in measure 21, a trumpet soars above the texture. This is reminiscent of the "twisted counterpoints" that Milhaud describes as early jazz. As an interesting textural contrast the walking bass harp is absent. The clarinets come in with an additive melody in measure 22 accompanied by both the harp and bass. This entrance is additive in nature featuring first the G and A-flat dyad followed by set [013] with notes {F, G, A-flat}.

¹⁶ INF stands for interval norm form. Interval normal form shows the intervallic profile of all sets belonging to a given prime form. A comparison of interval normal forms often reveals intervallic relationships between different prime forms.

Stravinsky's *Ragtime for Eleven Instruments* is a kaleidoscope of ragtime motives or "licks." The opening gesture holds a unique place as a cohesive melodic gesture in an environment largely dominated by non-melodious figures. This work is a continuous episode of "licks" in various rhythmic configurations, metric placements, and pitch levels. The main theme, doubled in two octaves in the opening, is largely based on the expanded C blues scale with A-flat as an outlier. It is syncopated, assembled by two forms of what Edward A. Berlin designates as ragtime rhythm b (see example 5-11 below).¹⁷ The dimunition appears first followed by the original form. The eighth-quarter-eighth-eighth motive, which is highlighted by accents, is imitated throughout the texture in the first three measures. Among the elements in this kaleidoscope of ragtime motives are the following: motives outlining a third, including jazz trichords [013] and [024];¹⁸ note bendings in rhythmic varieties; related neighbor motives; rhythmized chromatic figures invoking inflections; glissandos; dotted notes; and triplet figures (as shown in example 5-12).



Example 5-11: Ragtime rhythm b.¹⁹

¹⁷ Berlin, Edward A.: 'Ragtime,' In Grove Music Online. Oxford Music Online,

www.oxfordmusiconline.com/ragtime (accessed August 11, 2012).

¹⁸ Pressing, 136.

¹⁹ Berlin, Edward A.: 'Ragtime,' In *Oxford Music Online*, www.oxfordmusiconline.com/ragtime (accessed August 11, 2012).



Example 5-12: Motivic content from Stravinsky Ragtime for Eleven.²⁰

In "Minstrels," Debussy captures the spirit of improvisation to be found in jazz and ragtime music. The left hand accompaniment is a variant of letter b from Berlin's chart of ragtime-cakewalk rhythms. The rhythmic emphasis is on the downbeats and the "and" of the second beat, creating a characteristic syncopated effect. Although the notes in-between have been omitted the effect is still the same. The opening consists of a counterpoint between three

²⁰ "RM" and "3M" means ragtime motive and interval of third motive, respectively.

lines: the bass line, melody, and a succession of grace notes.²¹ The primary melody notes {D, E, F-sharp, A, B, D} come from the D pentatonic and D mixolydian scales. However, the key center of the bass is G. Hence, on one hand, this passage can be heard as bitonal. On the other hand, the non-resolving F-sharp is evoking the GM7 sound from a typical jazz progression. In measures 1 and 2, fragments appear before the introduction of the full motivic gesture in measure 3 (see example 5-13). This initial idea remains essentially the same as it grows additively. It seemingly evolves with each repetition until the arrival of the full gesture. The transformation of this initial "lick" simulates the improvisation process as a jazz performer expounds upon an idea with each repetition. Moreover, this gesture's appearance at important structural points in the piece, resonates with the banjo or guitar "licks" played by a blues musician at the end of individual verses. The full gesture has the sound of jazz or ragtime due to several aspects. In addition to the characteristic scales and syncopation, the interval of a third is emphasized by means of filled-in intervals and a skip. Staccato articulation also characterizes this motive. The countermelodic line is carried by two groups of grace notes. The figures outline a major and a minor third, respectively. Arranged canonically they yield {G, A, B-flat, B, C, D – evoking both the G major and minor pentatonic. Incidentally, the presence of a major and minor third is also redolent of Stravinsky. Both the G major and minor pentatonic scales are embedded within the G expanded blues scale: {G A B-flat B C C-sharp D E F G}.

²¹ Peter DeLone, "Contrapuntiste Malgre Lui," *College Music Symposium*, Vol. 17, No. 2 (Fall 1977): 48. In this article, DeLone identifies "subtle forms of melodic and motivic combinations, counterlines, and countertextures that involve the play of lines in what may be described as a kind of unobstrusive idiomatic counterpoint."



Example 5-13: Debussy "Minstrels," measures 1-4, 9-10, 26-29, and 58-59.

In measures 9-10, a repetitive figure consisting of second dyads drawn from the G pentatonic scale, leads right into the second theme in G pentatonic (refer to example 5-13). This repetitive figure acts as a foreshadowing of the coming theme as it arpeggiates an E minor triad just as its successor arpeggiates an E minor 7th chord. The second melody, has a character of an improvisation or a phrase ending blues "riff" as it arpeggiates from the treble to the bass register. The minor chord arpeggiation solidifies its relationship with the first melody. With note E treated as a passing tone, the first melody arpeggiates the B minor seventh chord.

In measures 16-18, the first theme comes back briefly in an inverted and altered form. There is a reiteration of note F-sharp, the last note of motive w, which captured attention in the opening measures. Motives x and y are inverted. There is also an interpolation before the appearance of the collapsed, contour inverted motive z. In measure 26, the altered first theme appears in E-flat (see example 5-13). The G-flat implies the E-flat minor pentatonic. The fifth scale degree is emphasized by suspension. It is followed by an interpolation consisting of the entire E-flat major pentatonic scale. Following the interpolation is an inverted motive x, its sequence, and the inverted forms of y and z. Included in the sixteenth note groups is leading tone D-natural, an outlier to the E-flat major pentatonic scale.

Motivic development is consistent throughout as demonstrated by measure 58, where motive x appears in retrograde form and rhythmic dimunition.

Within the refrain of Gerswhin's "Blue, Blue, Blue," jazz/blues "licks" are woven amidst descending chromatic lines – resulting in a post-tonal manipulation of the jazz/blues language. The appearance of the twelve-tone aggregate and heavy chromaticism in the first section suggest that his familiarity with post-tonal music may have inspired Gershwin's merging of the two languages. The refrain contrasts with the opening verse's one note melody on F-sharp – a potential leading tone navigating the surrounding tonal ambiguity.



Example 5-14: Gershwin "Blue, Blue, Blue," measures 3-4.

In measure 15, following the establishment of the key of C, a leap up to the unresolved leading tone on the word "blue" is for the first time made sweet, as it is harmonized as the 13th

of a D7 chord – dominant of the dominant. The thwarted resolution is followed by a chromatic descent supported by G7 harmony. The momentary rhythmic change from quarter notes to eighth notes as quarter note E-flat is approached, solidifies it as a chord tone in the dominant harmony. The momentary flutter of eighth notes creates of the effect of a bending or embellishment of the note E-flat (see example 5-15). This seeming inflection is followed by a strong beat arrival on ninth of the tonic chord. Due to the syncopated quarter-half note rhythm of measure 17, the ninth sounds like an accented lower neighbor bending of the third of the chord. However, true to the jazz-blues language the metric emphasis of this blue note overshadows the note it seeks to "embellish".²²

In measures 18-19, the same phrase is repeated with the concluding ninth seeking to overshadow its tonic as an upper neighbor. The arrival on the tonic is followed by an almost complete ascent up the C pentatonic scale minus note G in measures 19-20. This pentatonic ascent overshoots the octave, landing on fourth space E, which intones the word "blue." This time instead of being the third of the chord, note E is the ninth of the returning dominant of the dominant, D9. The overshadowing of D over E in the measures before finds its culmination as note E in turn enhances the harmonization of the ninth of the key. In measures 22-24, leading to a repeat of the refrain, there are a series of upper neighbor motives. Moreover, ragtime rhythms b and c, identified with brackets, are found as well (see example 5-15).²³ The final phrase of the second repeat, in measures 34-37 consists of an expanded passage of pentatonic figures.²⁴

 ²² Note D is apart of the C expanded blues scale: C D E-flat E F F-sharp G A B-flat C.
²³ Berlin, Edward A.: 'Ragtime,' In *Grove Music Online. Oxford Music Online,* http://www.oxfordmusiconline.com/ragtime (accessed August 11, 2012).

 $^{^{24}}$ This excludes note F in measure 35 on the "and" of beat four.



Example 5-15: Gershwin "Blue, Blue, Blue," measures 14-25 and 34-37.

In the following examples, there is further manipulation of the jazz/blues language. Bolcom's manipulation of the jazz-blues idiom reveals how the harmonic context can impede the discernment of the "licks." In a similar vein, a later example from Alban Berg demonstrates how "licks" can both arise from and be as quickly absorbed back into a post-tonal context.

In measure 17 of the first movement of Bolcom's "Summer Dreams," the discernment of a blues "lick" is hampered by octave displacement and a competing tonal center (see example 5-16). Moreover, in spite of its retention of its syncopation, accents, and repetitive nature – it is virtually unrecognizable. The notes E-flat, F-sharp, G and C in the same register and in the context of a C minor blues would be a recognizable bluesy lick. Here, by altering the blues sound, Bolcom misreads the blues sound.



Example 5-16: Bolcom "Summer Dreams," measure 17.

In measures 68-69, it is demonstrated how the addition of a single note makes a significant difference in the recognition a blues "lick." In measure 68, the violin's D and A over the piano's F blues does little to unite it with the piano line (see example 5-17). However, the entrance of D and A-flat tritone, along with the minor third emphasis in the topmost line successfully ushers in the blues sound.



Example 5-17: Bolcom "Summer Dreams," measures 67-69.

In Berg's *Der Wein*, a tango section is ushered in the midst of a 12 tone post-tonal idiom in measure 39. This is accomplished by means of a syncopated "lick" in the piano part, anchored in an A major blues with G-sharp as an outlier.²⁵ In measures 54-56, at the end of its presentation of a row form, a trumpet "lick" emerges that is also anchored in the A major blues (see example 5-18). Following the trumpet absorption back into the texture, minor 6th glissandos dart about the texture in measures 56-58 played by the second trombones. These gestures disappear as the first trombones enter with a row form.



Example 5-18: Berg Der Wein, measures 39, 54-57 (piano reduction).

In measures 995-6 of Berg's *Lulu*, the muted trumpet with the assistance of the piano exerts itself even more with a series of dotted eighth notes that create the sensation of "jabs" in the texture. These syncopated "jabs" in a high range are suggestive of improvisatory gestures. The piano support of these gestures are in keeping with authentic "comping" gestures that are apt to underscore the innovative "licks" of soloists. In measures 996-7, the tenor and alto saxes exchange the notes {E-flat, F, G-flat, A-flat}. The notes of the alto saxophone line in measures 997-998, with the exception of E-natural, are an example of OCT 2. Meanwhile, note inflections start to assert themselves in the texture. There is a B/B-flat inflection in the tenor sax in measure 998. In the next measure there is a D-flat/D-natural inflection in the first trombone. Suddenly in measure 1000, the "jab" gesture takes over the entire texture including

²⁵ Expanded blues scale on A: A B C C-sharp D D-sharp E F-sharp G A.

the piano. The individual notes of this gesture combine to create a G7 chord with a flattened 9th or set [02369]. This constitutes a tonal allusion in an otherwise post-tonal atmosphere. Synchronously, the violin presents the head motive with an identical rhythm to that of the muted trumpet line in measure 994 and 997. In measure 1002, there "jab" gesture harmony is a Fm raised 11th/F7 harmony or set [02378]. In the next measure, the clarinets play a gesture {D, A, G, F} which sounds like a jazz "lick." This gesture is set [0247]. Set [0247] has the following superset-subset relationship with set [02378]:²⁶

(21	4	14)	[02378]
(3	22	5)	[0247]

Also in measure 1003, the banjo plays a tetrachord taken from the second hexachord of character Alwa's row P4.²⁷

In measure 1005, the alto sax presents a fully chromatic line. The clarinet answers with a chromatic tetrachord. The imitation becomes continuous throughout the texture. Chromatic lines are seamlessly taken up by the trumpet followed by the clarinet and the alto saxophone. Again, the textures of classic jazz collective improvisation are being referenced. We come full circle as the clarinet and the trumpet intervene once more. These chromatic lines also feature pitch inflections which are suggestive of the jazz idiom. Meanwhile, the piano in measures 1005-1010, introduces a ragtime rhythm that is also found in Villa-Lobos' toccata in Bachianas Brasileiras and African Folk Dances.

The following examples of jazz licks are drawn from Bach recompositions whose original melodic aspects were found conducive to jazz motivic treatment. In Ragtime

²⁶ INF stands for interval norm form. Interval normal form shows the intervallic profile of all sets belonging to a given prime form. A comparison of interval normal forms often reveals intervallic relationships between different prime forms. ²⁷ Headlam, 356.

(Wohltemperiert), Hindemith replaced the sixteenths of the initial head motive with dotted eighth figures (see example 5-19). Moreover, the eighth notes are augmented to quarters. There is also the interpolation of one note E-flat in the last half of the melody. The first alteration is the most meaningful giving the impression of swung eighths. It also emphasizes the fact that it is a neighbor note figure. As a result, its repetition stands out even more. Developmentally, this "swung" head motive is exploited. It is displayed in rapid succession and subjected to a variety of harmonic contexts. The variants include its expansion as an incomplete neighbor triplet figure.

Bach Fugue in C minor



Ragtime (Wohltemperiert)





Example 5-19: Bach Fugue in C minor and Hindemith-Bach Ragtime (Wohltemperiert).

One key to Loussier's successful integration of Bach's stylistic language with a motivic language from jazz in his recomposition of the Toccata and Fugue in D minor is the equalization of the rhythm. At the heart of the jazz style is the swing feeling articulated by

eighth notes. Hence, Loussier articulates the theme in eighth notes and quarter notes. The addition of the quarter note emphasizes the embedded descending line of this compound melody. This revision seems analytically based. The tail motive of the theme, previously labeled as motive x, is largely reinterpreted in a series of syncopated dotted figures (see example 5-20). Moreover, the bass and percussion accompaniment enters at this point. Hence, Loussier has integrated jazz rhythm and color into the main theme itself—making these elements also the subject for variation.





Example 5-20: Comparison of Bach's fugal subject with the Loussier recomposition.

CHAPTER 6

CONTRAPUNTAL CONVERGENCES

The following discussion elucidates the way that this paradigm engages counterpoint. There is a wide variety of contrapuntal processes emerging from a wide variety of contexts including perceived homophonic dance forms. These contrapuntal devices are: countermelody, imitation, harmonic exchanges, and gap fill gestures, inverted counterpoint, compound melody, motivic development, and canon. Moreover, within some of the works within the paradigm, there is a shifting distinction between countermelody and accompaniment. Independence among voices is no longer a static phenomenon. Independence becomes dynamic and unstable – vacillating back and forth with states of ambiguity.

Gershwin's "Blue, Blue, Blue" has several contrapuntal attributes. In the first two measures a gap-fill gesture can be observed in each voice (see example 6-1). In measures 3-11 of the verse, as each voice in the accompaniment begins at a different point on the chromatic scale, there is an imitation of various chromatic strands in the texture (as shown in examples 6-2 and 6-3). There are some interesting moments of exchange of pitches. In addition, the melody of the refrain's melody is characterized by a gap-fill gesture as an ascending leap of an octave is filled in by stepwise and chromatic motion.



Example 6-1: Gershwin "Blue, Blue, Blue," gap fill gestures in measures 1-2.



Example 6-2: Voice exchanges in measures 3-4 from Gershwin's "Blue, Blue, Blue."

In Gershwin's "Mine" from *Let 'Em Eat Cake* contrapuntal touches are observed as well, as a countermelody emerges from the harmonic accompaniment in real time. In the first refrain, notes {E, F, D, D-sharp}, the first notes of the coming countermelody are embedded in the chordal accompaniment (see example 6-3). The overlapping melody and countermelody are foils of one another. The countermelody is more complex rhythmically and harmonically. Concurrently, in counterpoint with both the primary melody and the embedded countermelody is a descending chromatic trichord {G, F-sharp,F} in a tenor line. In measure 9, during the second phrase, both secondary lines are transposed up a fourth while the melody is transposed down a fifth. This transposition of the primary melody and its embedded countermelodies is redolent of the subject-answer relationship found in fugal counterpoint. During the repeat of the "answer" phrase in measures 25-32, the countermelody is replaced by descending chromatic lines in overlap.

In the second refrain, the once embedded countermelody is rhythmized and embellished asserting its independence (see example 6-4). The accompanying chromatic countermelody is momentarily absent until measure 37. Interestingly, the countermelody is a progressive take on the traditional melodies of counterpoint. It features a chromatic lower neighbor that is harmonized in the next measure as the raised fifth of a G dominant seventh chord. During the answer-like phrase in measures 41-47, the primary melody is doubled at an octave below. In measure 57, during the repeat of the "answer" phrase, several alterations of the countermelody

are observed. The notes are rearranged. The rhythms are augmented. The line is harmonized at a minor third below. These changes are accompanied by chromatic descending lines in overlap. In the closing measures, all lines unite in homorhythm into the final cadence.



Example 6-3: Gershwin "Mine," from Let 'Em Eat Cake, measures 1-7.



Example 6-4: Gershwin "Mine," from Let 'Em Eat Cake, measures 37-40.

In Bolcom's "Rag Inferno," the polyphony of traditional ragtime is enhanced resulting in complex webs of linear chromatic lines. ¹ In measures 1-5, there is a chromatic tenor line embedded within what is otherwise a typical ragtime accompaniment moving from G to G-flat/F-sharp to F to E (see example 6-5 below). There continues to be a discernible tenor line through measures 4-8, moving from A to G to G-sharp twice then from B-flat to C-flat to Dflat. Moreover, there is an additional inner voice that has the following line: C, D-flat, C, B, D, C, D. Contained within the right hand gestures in measures 6-8 and measures 11-13, are compound, chromatic melodic lines. In the previous etude, the individual voices, largely in block chords, changed together. Here, the changes are not quite as closely parsimonious and

¹ Hiram Moderwell states the following regarding the presence of polyphony in ragtime: "…It has gone far beyond most other popular music in the freedom of inner voices (yes, I mean polyphony) and of harmonic modulation."

Carol Lems-Dworkin, Africa in Scott Joplin's Music (Evanston, IL: Carol Lems-Dworkin, 1991),14.

predictable. The right hand gestures consistently come on the off-beats, resulting in each gesture being positioned betwixt two adjacent harmonies in the left hand. Moreover, additional contrapuntal interest is created by note exchanges between the two hands (see example 6-6).



Example 6-5: Bolcom "Rag Inferno," measures 1-15 modified Schenkerian graph showing contrapuntal voices.



Example 6-6: Bolcom "Rag Inferno," measures 6-8 (voice exchanges).

In the Ragtime movement of Hindemith's *Suite 1922*, whose melodies and accompaniment are almost entirely the product of a layering of motives, there is a continually shifting distinction between countermelody and accompaniment that is also encountered with other works within this paradigm. The primary theme consists of a neighbor note gesture, a minor third gesture, a dissonant suspended note (after the "and" of beat two), and quartal chords. These gestures are treated sequentially evoking the C-sharp, G-sharp, and B expanded blues collections. In each instance, the dissonant suspended note is an outlier to the blues scales implied by the neighbor note and minor third gestures. These suspension gestures which punctuate every sequence are references to the suspension gestures to be found in works such

as Joplin's "Maple Leaf Rag" (see example 6-7). ² A similar suspension gesture is found in Milhaud's rag caprices.



Example 6-7: Hindemith "Ragtime" from Suite 1922, measures 4-7.

In this example of ragtime, each suspension has the sensation most times of continuing to ring into the next gesture, similar to oblique motion between overlapping voices. This sensation can be attributed to a combination of factors. In the very first suspension gesture held between measure 4 and 5, the left hand doubles the suspension at an octave below. This point of convergence between the right and left hand – subtly undermines the independence of the countermelody. The ringing open octave along with an accent in both hands and a *forzando*, makes this suspension stand out in the texture. Moreover, as the right hand begins the next sequence, the left hand extends the suspension by an extra sixteenth note – thereby setting up an aural expectation for extension although it is not always met.

The countermelody, on the other hand, consists of: a three note chromatic pick up gesture, a seventh chord arpeggiation with an omitted fifth, augmented triad, and the suspended gesture. As stated earlier, the left hand at times asserts its own independence and at other times blends/harmonizes with the right hand melody. Throughout this movement the primary theme's

² A comparison of the suspension gestures of Hindemith's *Suite 1922* with Joplin, reveals the former's version of the gesture to be completely dissonant and out of the scale collection. Hindemith's gesture is not governed by harmony it is linearly conceived. Moreover, the sonorities are the product of a layering of intervallic structures. In Joplin's *Maple Leaf Rag*, the suspension gestures are most of the time are consonant notes creating 6ths. There are instances, however, such as in measure 10, the suspended note is a raised 5th that is harmonized as an A-flat augmented triad.

motive is pitted against the bass' pick up gesture. By measure 6, however, the countermelody's identity is submerged into the primary theme.

In the B section, the {B, C, C-sharp} goes from being the pickup gesture, to being a new countermelody in its own right. Here this gesture is respelled as {B, C, D-flat}. The contrapuntal interest between the right and left hand continues with a hocket-like alternation of gestures. The right hand gesture is a fragmentation of the primary theme from the previous section. In measures 32-41, there is harmonization between the two voices as individual notes and sonorities are exchanged between the two hands (see example 6-8). It is in measures 33-34 that the pick up gesture reappears as a transposed {D, D-sharp, E} in the left hand. Thereafter, the pick up gesture is treated sequentially along with the complete motive from the primary theme in measures 37-39. In measures 40-41, the original notes of the pick up gesture appears respelled, and reiterated in rapid succession. The rapid succession of the primary theme motive and the bass' chromatic "pick up" gesture, is evocative of jazz and ragtime improvisation as motives called licks are often repeated in rapid succession for effect.



Example 6-8: Hindemith "Ragtime," measures 30-36 (voice exchanges).

The C section begins with the bass "pick up" gesture in the right hand as a lead-in to a new theme. This new theme bears similarity to the primary theme of the A section consisting of minor seconds, minor thirds, and fourths. Suspensions also are a defining characteristic of soprano line, as seen in measures 53-56 (see example 6-9). This new theme is accompanied by

an alto countermelody which is constructed almost entirely of downward minor thirds. At times, this alto line aurally converges with the top line on the downbeat such as that observed in measures 52, 59, and 66. The sense of convergence is reinforced by the downward third gesture expanding to a two sixteenth-eighth note gesture. This briefly perpetuates the sense of a sequential triadic arpeggiation momentarily initiated by the combination of the soprano and alto lines on the first beat. At these junctures, there is an alternation of a respelled D-flat major triad with a diminished triad. The alto line, at other times, is distinct from the soprano. This shifting distinction and ambiguity between the soprano and alto lines is likened to a visual illusion of shifting images – a strange loop of sorts. At once, the soprano is distinct yet a participant in its own accompaniment. A similar ambiguity regarding the melody and countermelody occurs in the Stravinsky tango.



Example 6-9: Hindemith "Ragtime" from Suite 1922, measures 51-54.

In Stravinsky's *Tango*, fragmented melodic gestures alternate with a double seventh chromatic gesture, {C, C-sharp, D} creating a subtle contrapuntal call and response. This double seventh gesture will prove to be of motivic significance. In measure 9, a clear melody emerges. In measures 13-16, a countermelody alternately asserts its identity and merges with the melody over an increasingly chromatic bass line. This ambiguity of the countermelody establishes its role as plastic, ever changing.

In measures 17-24, the second half of the A section, there is an interplay between the melody and countermelody in a largely static environment (see examples 6-10 and 6-11). This is a subtle experiment with contrapuntal technique within the context of this dance form. In measures 22-23, a descending chromatic line, {A, A-flat, G, and F-sharp} moves from left hand to the right as an arpeggiation of D minor harmony moves from the right hand to the left – an example of inverted counterpoint. Moreover, a chromatic line in an inner voice gives rise to two sevenths. In the next measure, as the chromatic strand {A, A-flat, G, and F-sharp} is repeated once more in measure 24, over a D minor arpeggiation and cadence with a picardy third. There is also a second chromatic line preceding from an octave below on note A in contrary motion. The second line consists of notes {A, B-natural, B-flat, C, and D}. The texture of this section becomes increasingly complex, as a chordal texture morphs into a tangle of individual lines.

In the trio section found in measure 33, D minor harmony is largely prolonged by arpeggiations. Again, there is an interplay between the melody and a chromatic countermelody – as this time the melody is harmonized.



Example 6-10: Stravinsky Tango, measures 19-21.



Example 6-11: Stravinsky Tango, measures 22-24.

The fugue from *Creation du monde* begins with a rapid, thirty-second-note gesture in the piano presenting sets [015] and [0125]. The latter features the F-sharp/F inflection. All of the notes together comprise the hexachord [014568]. This hexachord, along with other pitch class sets encountered in this work, is intervallically related to the hexatonic set [014589]. Additionally, set [014568] and [014589] are voice-leading offsets of one another³.

In the last half of measure 3, the cello enters with the subject in D after a false start on beat one. Mawer provides the following insights into the fugal subject: "The first four pitches of the subject: (D, E, D,F) in the words of Hodeir, [is] 'particularly prized by jazz inspired composers."⁴ In her footnotes, Mawer notes: "As observed by Hodeir, the motive is also used in Gershwin's *Rhapsody in Blue* (1924)."⁵ These inflections not only become motivic but they become the source of cross-relations that are readily found in various works by Stravinsky.

Mawer's reference to the embellishments to be found in jazz improvisation is evocative of embellishments in the Baroque idiom. In addition, the subject has an additive quality. It seemingly mimics the process of improvisation as a soloist starts with a riff or melodic idea expounding upon it with each repetition. Harmonically, both Mawer and Hodeir identify within the fugal subject a move to the subdominant, which is consistent with jazz and blues music. Mawer states that the fourth scale degree is not used directly because of the importance of the

³ Joseph N. Straus, "Uniformity, Balance, and Smoothness in Atonal Voice Leading,"

Music Theory Spectrum, Vol. 25, No. 2 (Autumn 2003): 305-352.

⁴ Mawer, 155.

⁵ Mawer, 155.

pentatonic collection in initial statements in the tonic.⁶ The first four pitches pointed out by Hodeir create the trichord [013]. The notes {D, E,D, F-sharp, F,D} comprise set [0124]. The notes {F-sharp-F-D} is set [014], containing the same F-sharp/F inflection as the opening piano gesture. The minor third is a primary feature of the subject which is embellished additively. The F-sharp-F figure in the subject is the retrograde of the F/F-sharp figure in the piano gesture. The fugal subject then erupts registrally into the hexachord [014679]. This set also recalls the full opening piano gesture [02347]. As stated earlier, these sets have a supersetsubset relationship with one another as well as with the hexatonic hexachord [014589].⁷

Some sets, such as [0124] and [0125] are voice-leading offsets of one another. Other sets are embedded in larger sets such as [0347] and [014]. In measure 9, the notes {G-sharp-Gnatural –F-sharp-E} from the contrabass line constitutes the set [0124]. In this passage, the idioms of post-tonality, jazz, and counterpoint continue to intersect. The hallmarks of traditional counterpoint are observed as the trombone and contrabass move in contrary motion. The trombone goes down from A to E while the contrabass goes up from A to E. The trombone line presents set [0125], while the contrabass is formed from set [02347]. A look at the intervallic content of both sets, (1137) and (21135) respectively, reveals a superset-subset relationship. The trombone line is a subset of the contrabass line. On closer inspection, the relationship between the trombone and the contrabass line is even more complex. In fact, the contrabass serves triple duty: as a foil to the trombone. The contrabass plays the exact same notes initially played by the trombone. The trombone, in turn, imitates in overlap – with set [0125].

⁶ Mawer, 156-7.

⁷ This relationship is observed in a comparison of INF intervallic content of these sets. INF stands for interval norm form. Interval normal form shows the intervallic profile of all sets belonging to a given prime form. A comparison of interval normal forms often reveals intervallic relationships between different prime forms.

Meanwhile, in measure 16, the saxophone line is partially imitative of the trombone countersubject. There are rhythmic differences but the pitches are exactly the same. The exchange between these instruments is akin to a rapid ricochet, evoking the charged activity of classic jazz's collective improvisations.

This textural complexity continues into measure 21. Here, the saxophone and contrabass are initially a fourth apart, moving again with the same rhythm harmonizing at different intervals just as in measure 17. Both represent the countersubject we first encountered in measure 16. Upon closer inspection in measure 21, there is a {D-C-sharp-C} gesture, [012], in the saxophone that is imitated in the contrabass. In the same measure, imitation also begins between the trombone, the saxophone and the contrabass involving set [02347]. It is related to [0125] with a one note difference as seen in measure 16. The imitation continues until measure 23. Also, the C-sharp/C inflection is featured in imitative exchange between the trumpet and the trombone in measure 22.

Tatum's "Jitterbug Waltz" begins with an arpeggiation of the tonic harmony culminating in three descending lines. The melody of the A section is complex like a Bachian melody – best described as compound (see example 6-12). Its top most line, beginning on scale degree three descends stepwise over an octave harmonized by thirds. After an initial downward skip of a third from B-flat, the bottom line reveals itself as canonic imitation at an octave below. This all happens over an E-flat – B-flat open fifth drone. In measures 5-6, a faint chromatic countermelody is discerned, which was previously absorbed into the accompanimental harmonies. However, by measure 7, this countermelody is absorbed once again – this time into an A-flat 9 (added 6th) harmony. As seen in other examples in this taxon, some countermelodies have a propensity to move back and forth between independence and
interdependence. In keeping with the blues, the remaining space between measure 7 and the next phrase is filled in with ad-lib gestures consisting of neighboring notes, arpeggiation, and a chromatic descent into extended dominant harmony.



Example 6-12: Modified Schenkerian sketch of measures 3-7 and 11-14, "Jitterbug Waltz."

In the repetition of the A section, the tenor line is more well defined in measures 12-14. This time it is embellished. An initial leap and octave displacement in measure 13 implies an added melodic dimension to this tenor line – very evocative of Bach artistry. As the B section ensues in measure 27, there are implications for a multiplicity of melodic lines. Here, there is a compound configuration consisting of a melody and a partially chromatic countermelody. Moreover, there continues to be leaps in the left hand accompanimental gestures implying additional voices. Like a Bach keyboard work, the texture of this piece is prone to expand and contract at any moment revealing and obscuring latent voices in the texture.

With each repetition of the A and B sections the embellishments get more complex. In keeping with an improvised solo in jazz style, these embellishments are characterized by

increasing chromaticism, wider leaps and increasingly complex rhythms. Triplet and quintuplet groupings seem to defy the meter. The extremes of the highest and lowest registers are increasingly explored.

The next examples discuss convergences in the use of canonic technique. In measures 104-112 of Bartok's *Contrasts*, the clarinet and the violin indulge in an imitative exchange of pitch class sets [013], [0134], and [0235] (see examples 6-13 and 6-14). In measures 113-117, there is a near canonic imitation of a scalar figure happening between the two instruments. At the midway point, the violin breaks the pattern while still maintaining the same contour. On the scalar ascent, both instruments share a collection of pitches that could be labeled two ways. Favoring the A-natural as the tonic centric pitch and treating note A-flat as an outlier, the collection could be labeled as A-Phrygian. This reading is consistent with a coming modal passage. On the other hand, note A-natural can be treated as an outlier, this collection could be interpreted as an occurrence of AC-2. This reading is consistent with the previous passage. Perhaps being located in at a musical crossroads, this scalar material can be interpreted by representative of both collections at once. On the descent, note E-flat places the material after it solidly within a key signature of three flats.



Example 6-13: Bartok Contrasts, measures 104-117 (violin and clarinet parts).



Example 6-14: Bartok Contrasts, measures 112-117 (piano part).

In measure 139-142, the clarinet plays a chromatic ostinato that serves as a countermelody. The clarinet repeatedly returns to a sustained D-sharp that supports the piano's D-sharp pedal. From measures 143-147, both violin and the clarinet sustain D-sharps. They create a fleeting sense of imitation in these measures as leaps of an octave in the violin prompts similar leaps of an octave in the clarinet.

Beginning in measure 148, the violin and clarinet indulge in a syncopated, E-Lydian scalar canon with the piano. In measure 152, the instruments break from the canon and settle on the note D-natural. Here they imitatively exchange octaves and cross voices while sustaining a single pitch.

In measures 39-49 from the fugue in Villa-Lobos' *Bachianas Brasileiras nr.1*, there are two instances, in which a dissipating texture reveals a brief passage of canonic imitation. During the first canonic episode, the key changes from C minor to G minor. In comparison to the original fugal subject whose centricity is obscured by a prolongation of upper neighbors; the *dux* straightforwardly outlines C minor.⁸ On the other hand, the centricity of the imitating voices is momentarily obscured by their pick up notes. The first canon's *dux* is based on the second phrase of the fugal subject, noted as (a + c). The motion is largely stepwise like the

⁸ Although the Schenkerian graph in example 6-15 does not show the full extent to that the dissonances are prolonged, a comparison to the graph of the canon's dux does show reveal how the latter possesses less ambiguity.

fugal subject. Moreover, the four sixteenths of motive c are altered, resembling the ascending scalar tail figure from motive "e" (see example 6-15).

The canon begins at an octave between the two lower cello parts (see example 6-16). The first note of the third cello's *comes* initially promises a canon at the ninth. Following imitation of the (a +c) phrase, there is an embellishment of the *dux* as well as free counterpoint juxtaposition of motivic fragments from the subject. The second cello part seemingly begins a canon at an octave above the third cello. However, it quickly diverges by the second beat partaking of free counterpoint. The first cello initially begins a canon at a sixth with its predecessor. As it canonically embellishes the second cello line, the interval sixth is briefly maintained before it departs from the canon altogether. The lines of the two canons are primarily linearly conceived. The initial simultaneities do not create coherent tonal harmonies. The harmonies that occur later are primarily non-functional, that is, excluding the articulations of the tonic chord. In keeping with traditional canon, the harmonic intervals between the voices are primarily thirds/tenths, sixths and fifths.

A second canon ensues in measure 44 in the key of G minor. It is a canon at an interval a fifth, based on the (a + b) phrase of the fugal subject. Like the one before it, the imitation breaks after its first phrase. Unlike the previous canon, however, divergences are followed by free counterpoint that is motivically independent of the fugal subject. Also, unlike the previous canon, harmonic autonomy is displayed in the third and first cello parts. The third cello part initially articulates d minor with its scalar figures featuring E and F-naturals. By the third measure, however, the decisive return of E-flat signals a reversion back to G minor as it approaches the G pedal. The second cello enters at an interval of a fifth before diverging into

free counterpoint. The first cello line, which is cast in a D major/minor, initially enters at a fourth above. However, after its initial eighth note figure the first cello imitates at a fifth above before diverging.



Example 6-15: The fugal subject and dux from Villa Lobos Bachianas Brasilieras No. 1.



Example 6-16: Villa Lobos Bachianas Brasilieras No. 1, measures 39-49 (canon).

There are two phrases of canonic imitation in Gershwin's "Crap Game Fugue." The first canonic phrase, found in measures 19-22, appears four measures before a subject entry in the dominant key of D minor (see example 6-17).⁹ The second canonic phrase, found in measures 33-35, appears shortly before the fatal blow that ends the scene and the fugue. These canonic phrases are based on an entirely new motivic figure that is not related to the fugal subject. The imitated motive is two beats long, characterized by stepwise movement that is followed by a minor seventh leap and a skip of a minor third. In both instances, the tenor voice enters first followed by the alto voice at a motivic interval of a minor third above. The tenor's minor seventh leap results in voice crossing upon the entry of the *comes*. In measures 19-20, both melodic lines are drawn from OCT 1, each having two outliers respectively. Once breaking imitation, the alto line continues in OCT 1 with its syncopated minor third gesture taken from the fugal countersubject. Synchronously, the tenor assumes a HEX 0 tetrachord line characterized by leaps. In measure 21, the texture expands as the soprano voice enters a compound tritone above. The first note of each entry taken together spells a G diminished triad, highlighting the motivic third interval. The entire soprano line is embedded in OCT 0. As the two lower voices break imitation, the soprano voice continues with gestures that are rhythmically related to the new melodic figure. The soprano's free counterpoint includes scalar figures that outline the motivic interval of a tritone. The vertical intervals between the voices are primarily sixths, thirds and tenths. A comparison of this passage with the Villa Lobos example shows Gershwin to be freer with melodic motion yet more strict with the variety vertical intervals.

In measures 33-35, the foreign motivic figure from measures 19-20 reappears (refer to example 6-17). However, unlike the previous instance, the octatonic and hexatonic collections

⁹ This analysis is based on a piano reduction.

are not evoked here. The canonic entrances occur in minor 3rds on notes D, F, A-flat, and Cflat – spelling a fully-diminished 7th chord. Again, there is voice crossing with each successive entry. This happens over a B pedal, signaling a coming modulation to E minor. The presence of notes D, F, and A-flat along with the third and fifth of the B major triad, confirms the harmony as an altered dominant which includes a raised ninth, lowered fifth, and a thirteenth. Most of the vertical intervals between the voices are thirds. Once imitation is broken by the inner voices, chromatic lines ensue, perpetuating parallel thirds.



Example 6-17: Gershwin "Crap Game Fugue," measures 19-20 and 33-35.

Mingus' *Canon* is the final canonic example. It is based on the C minor pentatonic/C dorian scale (see example 6-18). Its motion consists of stepwise motion and skips that do not exceed a fifth. The primary melodic emphasis is on skips of a third and neighbor note figures. Although the melodic motion is relegated to a small span, the tessitura is sizable equaling an octave plus a third. This canon at an octave begins with the tenor sax followed by the trumpet and the piano left hand. Entrances are made on the second quarter note. There is a considerable amount of voice crossing throughout. There is a wide variety of vertical intervals including seconds, octaves, and tenths. Additional accompaniment includes percussion and muted, extemporized piano right hand chords. Many of the simultaneities in the canon articulate F7

and Cm7 chords. Entry of all voices is followed by a saxophone solo section in 3/8 time. The solo is accompanied by an ostinato in the rhythm section and the canon in the trumpet part. This juxtaposition of two musical styles – the canon with jazz improvisation – mirrors the Lewis recompositions of Bach preludes in which the Bach original and a solo section alternate. This piece ends with the saxophone and trumpet's reintroduction of the canon. Before the close, the saxophone departs from the canon to extemporize once more. At this point, the avant-garde style of the saxophone extemporizations and the rhythm section accompaniment evokes the avant-garde works of John Coltrane such as Love Supreme.



The next examples of contrapuntal convergences come from Davis' Cool School recordings. In the opening of Davis' "Moon Dreams," the horns start out homorhythmically in close range. There is the illusion of complete parallelism, however each voice has its own identity. Deviations from the parallelism create a subtle heterophony. Moreover, intervallic gestures and individual pitches can be found moving through the texture from voice to voice. Additionally, the minor seconds and major seconds dissonances between voices do not impede the smooth harmonic flow.

Oblique motion punctuates the ending of phrases such as in measures 3-4 and measures 6-7 (see example 6-19). Voice crossing also occurs in the texture. Such as in measure 6, the trumpet crosses a second time into the alto sax's range while the alto sax dips below. In the next measure, a phrase ending is once again molded by oblique motion while the trumpet sustains a high note A concert amidst contrapuntal motion. Meanwhile, the trombone crosses the alto sax's range leaping up a sixth to high G.

In measures 7-8, the trombone once again pierces the texture, with a soloistic leap of another sixth – this time crossing the horn line. In measure 9, the alto sax solo begins, accompanied by a brass countermelody. The texture thins slightly with the exit of the trumpet and horn. The countermelody comes in at a fourth below in the baritone sax, behind the alto sax. Meanwhile, the alto sax goes back down to G providing a sense of imitation. The trombone harmonizes with the baritone beginning on a major third below on E-flat. The tuba harmonizes with the trombone at fourth below on B-flat. Both the alto sax and the baritone continue back and forth between C and G, until the baritone breaks rank with a leap of a fifth to F. There is movement between C and G in the trombone and tuba as well, likened unto a voice exchange. This passage constitutes an intriguing manifestation of imitation in which individual pitches are imitated in rapid succession rather than an entire melody.

Also, in measures 9-10, there is a long-range voice exchange between the baritone sax and the trombone. In measures 11-12, an inverse relationship exists between the alto sax, baritone sax, trombone, and tuba lines. In the next phrase, there is another complex network of note exchanges in the texture. This begins in measure 13 as the ensemble, excluding the trumpet, takes up the second phrase of the B section melody (see example 6-19). Most leap downward by either a major or minor third. The alto sax leaps down a fourth while the tuba plays an ascending line. A multiple voice exchange occurs between the alto sax, baritone sax, and trombone over F minor 9th harmony.



Example 6-19: Davis "Moon Dreams," measures 1-5 and 12-13.

In measure 27, the baritone sax and trumpet create the sensation of imitation as they double the alto sax's repetitive gesture at the octave and unison. Meanwhile, the horn and lower brass maintain stepwise motion in quarter notes. The sixteenth gestures of the rest of the ensemble circle around a few notes – culminating in upward trills in measures 28-29. These upward trills mirror Davis' opening upward second gesture. In measure 29, the horn and trombone take up this gesture imitatively. Also in this measure, the trumpet abandons the sixteenth gesture to sustain a high E, recalling the earlier moments of oblique motion in measures 3-4 and measures 7-8. Oblique motion is going to play an important role in the final section of this work. Here is a contrapuntal contrast to the largely homorhythmic texture of the beginning sections. In measures 29-32, the texture becomes more varied. At times, instruments

splinter off into different groupings. At others, they come together homorhythmically as an ensemble. Throughout this passage, there are different manifestations of the downward gesture.

In final section beginning in measure 42, everything seems to halt as the alto sax sustains a high concert F-sharp against various contrapuntal lines (see example 6-20). This passage is similar to instances of oblique motion encountered earlier in measures 3-4, 7-8, and 29. In measures 45-55, the trumpet solo line is accompanied by texture enhanced by canonic entrances, melodic convergence, imitation, and countermelody.



Example 6-20: Davis "Moon Dreams," measure 42-45.

In measures 21-33 from Davis' "Israel," there is a rapid motivic exchange between the melody and countermelody, which are doubled at a unison and octave, respectively. Initially, in measure 21, a fragment of motive c, notes G and F, is exchanged between the two themes (see example 6-21). The F and G of the primary melody is answered by its retrograde G and F in the countermelody. The countermelody is in turn answered by the primary melody with a descending line {G, F, E-flat, D, C}, the complete form of motive c. The complete form of motive c is then answered by the countermelody's chromatic descent from B-flat to G, a form of motive b. This filled-in gesture in the baritone sax and horn is answered by the gap gesture, B-flat and G, in the alto sax and the trumpet. Synchronously, there is a second countermelody, which is doubled at an octave in the trombone and tuba part. It harmonizes with the subject and first countersubject alternately. Its rhythmic patterns and contour is what differentiates it from mere accompaniment. In measures 21-22, is a D – E-flat figure can be seen moving from one

rhythmic configuration in the tuba to another in the trombone and then the trumpet and alto sax. Moreover, in the midst of these note exchanges in measures 21-25, there are points in which the entire ensemble, lower brass and piano included, converges on suspension gestures. However, due to the continuous overlap and motion, these points of convergence are at first imperceptible. In measure 24, there is a voice exchange of notes C and E-flat occurring between the melody and countermelody. In the remainder of the passage leading to measure 33, an imitation of motives and an overlapping of gestures continues.



Example 6-21: Davis "Israel," measures 21-25. Imitation, voice exchanges and harmonic convergences.



Example 6-21: Davis "Israel," measures 21-25, continued.

Spatial Convergences

The onset of musical space is the logical result of contrapuntal processes evolving in complexity throughout the twentieth century. Therefore, it stands to reason that as the styles of post-tonal music, jazz, and counterpoint converge, there is an emergence of works that anticipate the advent of musical space.¹⁰ The markers of musical space are the following: accretion intervals, use of tone clusters, micropolyphony, expansion and contraction of parameters, and so called Ligeti signals.¹¹ Although current scholarship associates some of these markers as unique to Ligeti's personal compositional style, these markers do appear in twentieth century works that predate Ligeti. This phenomenon is similar to the existence of twelve-tone aggregate writing that predates Schoenberg. These markers of musical space also,

¹⁰ Musical space as defined by the theories of Schoenberg, Varese, and Ligeti.

¹¹ Accretion intervals are defined as an interval attached to the outside of a motivic interval. Ligeti signals consist of "a fourth made up of a minor third and a major second or the other way around." Toop, 173.

as stated by Ligeti, have ties to Renaissance and Baroque contrapuntal processes.¹² In "Voice Leading as a Spatial Function in the Music of Ligeti," Jonathan Bernard makes the following observation regarding musical space, whose properties are elucidated by Edgard Varese and Gyorgy Ligeti, along with Arnold Schoenberg:

In Varese's music, to mention a well-known instance, counterpoint, in the traditional sense of simultaneously projected lines that form a continuous and unified structure while maintaining at the same time a certain independence, is replaced—to use the composer's terminology—by 'volumes', 'masses' and 'planes.' For example, the sound masses referred to by Varese can be taken as 'seemingly unrelated' (in his words) to exactly the same extent that contrapuntal lines in older music are seemingly independent.¹³

Sound mass counterpoint and micropolyphony are anticipated in earlier in the twentieth century by paradoxical motion and voice leading in moments of stasis, as well as, voice parts moving in close proximity. Such moments of stasis appear in Villa Lobos, Bolcom and Davis. Moreover, the imperceptible voice entries and exits of spatial counterpoint are anticipated by the constantly shifting gestures and timbres such as those found in the Stravinsky example; as well as, complex heterophonies of Davis. Also, the equality of the horizontal and pitch dimensions in musical space is demonstrated by the "twisted counterpoints" and layered textures of Milhaud's *La Creation du monde*.¹⁴ In Stravinsky's *Ebony Concerto*, the use of triads as structural markers anticipate Ligeti signals. Moreover, the registral expansions of musical space are reflected in Bolcom's "Summer Dreams."

¹² "The achieved eventuality came into being with a mighty conscious effort to organize the post-serial flux, and achieve 'correct counterpoint' without ideological madness: rather, the models were Ockeghem, Tallis's 40 part motet, JS Bach's *Singet den Herrn*—glories of medieval, renaissance, baroque vocal polyphony—but absolutely without stylistic/historical referents, let alone pastiche.

Robin Holloway, "Ligeti's Half Century," The Musical Times, Vol. 145, No. 1889 (Winter 2004): 59.

¹³ Jonathan W. Bernard, "Voice Leading as a Spatial Function in the Music of Ligeti," *Music Analysis*, Vol. 13 No. 2/3, Twentieth-Century Music Double Issue (July-October 1994): 230.

¹⁴ In an earlier discussion, Milhaud describes the "twisted counterpoints" of classic jazz that he sought to portray. Moreover, use of the term "twisted" implies a multi-dimensional space in which the individual dimensions begin to collapse upon one another.

In the opening measures of Davis' "Moon Dreams," DM9 harmony is prolonged. Although a single harmony is being prolonged, there is a sense of motion and voice leading (see example 6-22). This voice leading and motion in the midst of harmonic stasis is redolent of micropolyphony.



Example 6-22: Davis "Moon Dreams," measures 1-2.

In the final section of Davis' "Moon Dreams" beginning in measure 42, everything seems to halt as the alto sax sustains a high F-sharp against various contrapuntal lines (see example 6-23). This passage is redolent of earlier instances of oblique motion found in measures 3-4, 7-8, and 29. The texture of this final section is even more contrapuntal than the passages that came before. Here, the rhythmic flow of a slow ballad is disrupted. The note Fsharp is sustained for seven measures – alternately dissonant and consonant with its surroundings. The centricity has changed irrevocably to B - a tonic substitute for D major. For the next seventeen measures, the bass makes a long-range, embellished descent from B at the top the bass clef to B an octave below at the final cadence. At the beginning of this section, the trumpet and horn descend chromatically in parallel thirds. The baritone and tuba double the same line at an octave, initially playing in the same rhythm as the trumpet and horn. The trombone has its own line woven of seconds and thirds. Contrapuntal interest heightens as harmonized lines of sustained pitches move against faster moving lines. Sixteenth-triplet figures dart imitatively from instrument to instrument. Homorhythmic pairings break off with little notice. Note releases are imperceptible due to all of the overlap. The overall effect is that of stasis in spite of the constant motion. The unity of the compositional paradigm is

demonstrated by this static effect, which evokes Ligeti's micropolyphony. Certainly, Davis and the Cool School of the fifties had been exposed to the experimental musics of the post-War II era.



Example 6-23: Davis "Moon Dreams," measures 42-45.

Ligeti's *Desorde* from the Etudes exhibits a merging of jazz idiomatic gestures with a bitonal, meterless counterpoint which anticipates micropolyphony. A sketch of the opening of Ligeti's *Desorde* reveals a highly complex compound melody formulated from melodic strands that resemble what Jane Piper Clendinning calls "pattern-mechanico" (see example 6-24).

In each of the compositions of the pattern-meccanico group, the pattern-meccanico sections are composed of several overlaid linear strands, each of which is constructed from small groups of pitches rapidly repeated in a mechanical fashion with gradual changes of pitch content. The pitches of the small groups are ordered, and, in the repetitions of the units, their general ordering does not change even if some of the pitches of the unit do. The durational values assigned to the notes of the melodies are brief – in every case an eighth or less – which, combined with fast tempi, create a rapid turnover of pitch in the melodic lines. The small units are repeated quickly enough that the pitches almost fuse into a chord, creating a compound melody, complete with voice leading within each melodic line connecting adjacent harmonies. ¹⁵

¹⁵ Jane Piper Clendinning, "The Pattern-Meccanico Compositions of Gyorgy Ligeti," *Perspectives of New Music*, Vol. 31, No. 1 (Winter 1993): 195.



Example 6-24: Ligeti Desorde from the Etudes, measures 1-5.

A comparison of the counterpoint in Joplin's "Maple Leaf Rag" and Bach's Prelude with Ligeti's *Desorde* reveals a similar layered complexity. In examples 6-25 and 6-26 below are modified Schenkerian graphs, that like the graph above, separate each compound melody into individual voices. In comparing the Joplin and Ligeti examples, there is a similar meshing between consecutive voices as well as imitation. What makes the Joplin example stand apart from traditional tonal works is its prolongation of chromatic tones and cross relations such as that found in measure 17. A comparison with a sketch of a Bach D minor prelude reveals shared attributes between all of the compound melodies – in spite of stylistic differences. Bach's melodic movement is indeed more stepwise, characterized by gap-fill gestures.



10

AbM:

V7-----

20

ø

Example 6-25: Joplin "Maple Leaf Rag," measures 1-21 (modified sketch).

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----- V7-----



Example 6-26: Bach Prelude 6, measures 1-6 (modified sketch).

In Milhaud's *La Creation du monde*, the simultaneous appearances of melodic inflections and harmonic cross-relations are illustrative of what Schoenberg calls unitary space.¹⁶ According to Schoenberg's theory of unitary space, there is an equality between the horizontal and vertical dimensions. Modern counterpoint, as found in jazz and post-tonal music, by definition exhibits the attributes of musical space in varying degrees. The presence of the blues (proto-jazz) idiom does not negate the activity of musical space.

In the passage leading up to measure 44, there are layers of activity with more than one motive at work. The trombone and contrabass lines consist of chromatic gestures both ascending and descending from note G. At the same time, the cornet's sequential treatment of the subject's head motive begins to interact with the clarinet line contrapuntally. The piano now has the same head motive but embellished by tone clusters. The greatest height of contrapuntal complexity begins with the appearance of the countersubject in the flute and clarinet in measures 45-46. In measure 47, the clarinet plays an sixteenth note embellishing figure that is

¹⁶ Schoenberg, *Style and Idea*, 223-5. Verticalized pitch inflections, cross relations, the jazz piano technique of "crushing keys," and the chord-scale compatibility principle of jazz are all related to the Schoenbergian theory of musical space. In essence, there is an equality between the horizontal and vertical dimensions in musical space.

based on the subject's head motive which was introduced earlier in measure 28 in the oboe line. Meanwhile, in measures 46-47, the flute begins raising F to F-sharp as the violins once again feature the DM/dm polarity from earlier. Beginning in measure 50, the trumpet imitates the clarinet's sixteenth-note figures (see example 6-27). Concurrently, the piano, doubled by the cornet and bassoon, returns to the chordal accompaniment and a motive from measure 24. This time the piano's centricity is in D, with a few deviations, but for the most part in keeping with rest of the texture. The piano's deviations involve the notes D-flat and E-flat. The notes D-flat and E-flat along with D, which is both the central and lowest pitch in the texture. These notes together create the chromatic trichord encountered throughout this movement. The E-flat is soon picked up by the trombone as well. This is an inflection of the second scale degree. Until the final measure, there is a flurry of activity. Individual lines become "twisted" as Milhaud stated. Hence, each line is not fully perceptible. In this final portion of the fugue, just as in a Ligeti work, every action has another reaction resulting in positive feedback.



Example 6-27: Milhaud La Creation du monde, measures 52-53.

Bach recompositions are instructive regarding the nature of spatial convergences within this paradigm. The following discussion will examine recompositions by Brubeck and Hindemith.

Brubeck's recomposition of the *Chromatic Fantasy and Fugue* engages the spirit of Bachian artistry more than it engages specific motivic material. Brubeck's subject is a compound melody. A comparison with the Bach original reveals a vague similarity between chromatic subjects characterized by stepwise movement and leaps. Brubeck's compound subject consists of sets [0123], [0156], and [012]. The subject can be divided into motives x and y (see example 6-28). There is a second subject in the bass which is a chromatic line ranging from C to C. There is partial imitation between the two subjects (example 6-29).

In the Brubeck fugue, the answer appears in the dominant key as expected. Meanwhile, the countersubject appears also starting on G. The countersubject can be divided up into three segments a, b, and c. Segment a outlines an interval of a 3rd. Segment b outlines a fourth. Segment c outlines a sixth.



Example 6-28: Brubeck Chromatic Fantasy Sonata, measures 1-11.



Example 6-29: Brubeck Chromatic Fantasy Sonata, measures 1-11 (imitation and motives).

The vestiges of traditional contrapuntal technique are found in the ensuing passages of the *Chromatic Fantasy Sonata* (see example 6-30). In measures 23-24, is the last half of an inversion of the countersubject. In measures 25-27, there are sequences of motive c in the alto. By this time, there is an arrival in D major. The bass features a chromatic compound melody as indicated in the score example. The tenor line spans a perfect fifth going from F-sharp to C-sharp. In measure 28, are reoccurrences of sets [027] and [015]. In measure 29, the subject comes back in the soprano in G. The second subject appears in the tenor also in the key of G. There is imitation between the tenor and the first subject in the soprano just as in the beginning. Meanwhile, there is a pedal in the bass, sustaining a G chord. In measure 33, the subject appears in the bass, back in D major. The countersubject appears in the soprano also in D. The inner voices feature parallel thirds and crossing voices. The subject appears in measure 37, in G. The countersubject is in the bass also in G. In the inner voices, there is sequential treatment of a figure which features a dotted note figure derived from the countersubject.



Example 6-30: Brubeck Chromatic Fantasy Sonata, measures 23-33.

There are faint traces of the Bach original, in measure 41, with the appearance of segments from the d natural minor scale in the bass. Each segment outlines fourths and fifths. There is also a voice exchange between the alto and tenor lines. In measure 46, an ascending chromatic bass line along with overlapping compound and scalar lines, ushers in a metric change to 3/4 in measure 47. This adds a metric component to Brubeck's revision of the traditional form (see example 6-31). In fact, the remainder of the fugue consists of frequent metrical modulations which involve juxtapositions of 3/ 4 and 4/4 as well as 5/8 and 6/8. In measure 47, the scalar figures continue now in parallel thirds. Sixteenths now accompany motive x from the subject in the right hand. The rhythm of motive x recalls the eighth-sixteenth figures of Bach's countersubject and linking gesture.



Example 6-31: Brubeck Chromatic Fantasy Sonata, measures 44-48.

Brubeck's departure from the traditional form can be observed in the remainder of this fugue as the countersubject and motive x become the primary focus. Each appears in a variety of rhythmic configurations, including a multiplicity of triplet figures and dimunitions.

The appearance of these variants are redolent of Bach's unusual dotted eighth variation of the fugal answer in the original. Moreover, the free counterpoint accompanying these variants include motivic parallel thirds and contrapuntal techniques, such as voice exchange and contrary motion. In addition, a vague reference to the Bach original occurs in measures 70-99. Here, a G pedal is prolonged in the guise of various rhythmic configurations recalling a similar passage with a G pedal in measures 107-110 of the Bach original.

The following discussion of Hindemith's *Ragtime* (Wohltemperiert), is based on the arrangement for two pianos. In this Bach recomposition, the original theme is given jazz treatment and subjected to a post-tonal context. The first measure of the brief introduction has the head motive of the original C minor fugue ringing in six octaves. Instead of two sixteenths followed by eighth notes, the head is articulated as a dotted eighth-sixteenth followed by quarters. In essence, the head has been swung – in keeping with the aesthetic found in both ragtime and jazz (see examples 6-32, 6-33, and 6-34). In the second measure, there is a momentary sensation of a stretto while the head motive is immediately transposed to G-flat in the secondo part. However, a ringing of F tremolos in the bottom most hand accompanied by an A-sharp half-diminished seventh chord tremolo in the upper two hands; makes this statement of the head seem ominous. The section to follow gives an impression of an extended introduction. However, it later reveals itself as an interlude or reoccurring section.



Example 6-32: Opening of Hindemith Ragtime (Wohltemperiert), primo part.



Example 6-33: Hindemith Ragtime (Wohltemperiert), primo and secondo parts.



Example 6-34: Opening of Bach Fugue in C minor, WTC Book 1.

After a brief silence, in measure 3, there is an ascending flourish of sixteenth notes from WT1 over a trilled note A. Meanwhile, an octave doubled bass line, largely in WT1, moves in contrary motion. The scalar flourish is suggestive of the scalar passages found in the original. The Hindemith bass line, which is fitting for a tuba part in a ragtime band, evokes the bass line from measures 15-16 and 20 of the original.

In measure 5 of the primo part, there are series of augmented triads. The last three are apart of WT1 and are a whole step apart. Each triad is embellished chromatically creating the aural sensation of bent pitches. The major third continues to acquire motivic significance in this piece. This focus on the major third intervallically and harmonically is reflective of passages in the original such as the downbeats of measures 4-6. Endowing motivic significance to an otherwise peripheral element from the original is what Straus calls centralization.

Meanwhile, the secondo part introduces the triplet motive which soon acquires great significance in this work. This ascending triplet motive could be inspired by the tail motive of

the original. In measures 6-7, there is a repeat of measures 4 and 5. In measures 8-14, the dotted head figure is the primary focus in the primo part. Rhythmically, there is a variation of the head motive, dotted quarter and sixteenths, followed by its fragmentation. The back to back repetition of these dotted figures is suggestive of the original subject which itself is a rhythmic repetition of the head motive. In the realm of pitch, there is the planning of major thirds in both hands. This focus on thirds mirrors Bach's left hand sequence of parallel thirds found in measures 12-15 (see example 6-35).



Example 6-35: Bach Fugue in C minor, measures 10-15.

Meanwhile, in the secondo part, the bass line consists largely of a descending fourth and ascending minor third pattern. In the right hand of the secondo part, the triplet figure alternates with the dotted figure. In measures 11-13, alternating A major and G-sharp (A-flat) major triads give way to parallel thirds a followed by a chromatic series of dominant sevenths. Over a chromatically ascending, octave doubled bass line, the secondo right hand plays a series of dominant sevenths in contrary motion: F-sharp 7, F7, E9, and E-flat 7 with a flattened 5th. Synchronously, the primo part plays a series of chromatically descending minor chords with major sevenths (A-flat minor raised 7th, G minor minor raised 7th with a flattened 9th, G-flat

minor raised 7th, and F minor raised 7th) over a chromatically descending left hand. The harmonies of the primo and secondo parts together can be considered bitonal. The interval between the chordal roots of both parts are alternately augmented sixths and minor sevenths.

This chromatic planning of chords a minor seventh apart culminates in a bitonal cadence in a measure of 2/4 meter – drawing the A section to a close. This bitonal cadence consists of a C minor flattened 9th chord in the secondo part over a F minor raised 7th chord in the primo part. Both chords together create an F minor flattened 13th chord. The ensuing passage proceeds in cut time with an ever-increasing dynamic level. Again, the head motive is the primary focus. This time we see this lower neighbor gesture transformed into an upper neighbor gesture and back again. Again, in the primo part, we see a chromatic series of major third harmonizations. In measure 19, diminished triads in the primo left hand are pitted against an augmented chord in its right hand. In measure 20-23, triplet figures abound. In the primo right hand, an {E-flat, E-flat, D, C-sharp} a chromatic gesture overlaps in counterpoint with the harmonization of a lower neighbor gesture consisting of a F augmented triad and a C-sharp minor triad in first inversion. In the primo left hand, a lower neighbor gesture is harmonized by both an incomplete seventh chord and a F-sharp major triad. Meanwhile, in the secondo part, a hemiola is created as a sixteenth note variation of the lower neighbor gesture is pitted against triplet figures.

In the first fugato section, the full subject enters in C minor while the secondo part plays augmented harmonies on the downbeats along with a gesture based in part on Bach's original countersubject. Meanwhile, major third tremolos in the primo left hand give way to major third planning gestures. As the secondo part takes up the subject beginning in measure 35, the primo part plays triplet layerings of major thirds followed by triads, seventh chords, augmented triads, and other sonoric combinations.

Conclusions Regarding Convergences

The convergences that result from the interactions of these three musical styles occur in the following areas: harmony, motive, and contrapuntal processes. Harmonic convergences between these musical styles involve intervallic motives, altered chords, referential collections, pitch class sets, non-functional progressions, Neo-Riemannian progressions, and promissory notes. This abundance of harmonic convergences between post-tonal music and jazz is a consequence of a shared engagement with the harmonic structures of Western music. Jazz musician Leroi Jones witnesses to the inevitability of that shared engagement:

Ornette Coleman has had to live with the attitudes responsible for Anton Webern's music whether he knows that music or not. They were handed to him along with the whole history of formal Western music, and the musics that have come to characterize the Negro in the United States came to exist as they do today only through the acculturation of this entire history. And actually knowing that history, or those formal Euro-American musics, only adds to the indoctrination. But jazz and blues are Western musics; products of a Euro-American culture.¹⁷

To use Tymoczko's metaphor, scaling the same mountain of Western musical innovation achieves similar results.¹⁸ Harmonic structures and progressions from Western music history become carriers of style or rather vehicles for stylistic allusion.¹⁹ Moreover, these various

¹⁷ Lewis Porter, Jazz: A Century of Change (London: Prentice Hall International, 1997), 221.

¹⁸ "Though the expanded system is theoretically elegant, it evolved over a number of years, in the hands of a number of figures – Debussy, Ravel, Stavinsky, Bartok, Messiaen, Thelonious Monk, Charlie Parker, John Coltrane. All of these have explored various of the seven non-chromatic scales, like mountaineers climbing the same mountain from different sides, often unaware of the other's progress." Tymoczko, 146.

¹⁹ Stylistic allusion is listed among Burkholder's functions of existing music.

harmonic structures and progressions readily interact with one another. They are transformed as they are misread in different stylistic contexts.

Intervallic motives occur when intervals and larger intervallic structures become motivic to the piece. Intervallic motives occur both in the horizontal and vertical dimensions. In the horizontal dimension, intervallic motives occur melodically and in root movement. Like other types of motives, intervallic motives are subject to motivic variation. Often intervallic motives manifest in the form of gap-fill gestures. As notes are interpolated into intervallic gestures, motivic pitch class sets arise. Interval normal forms often provide additional insight into the subset-superset relationships between pc sets present in a given piece. On occasion, intervallic palindromes are encountered, such as those found in William Bolcom's "Summer Dreams." Verticalized intervallic motives influence sonority constructions such as trichords, quartals, tone clusters, near clusters, and structures resembling "Ligeti signals," as found in Bolcom's "Summer Dreams" and Davis' "Israel."²⁰ Moreover, in works such as Gershwin's "Blue, Blue, Blue," verticalized intervallic motives are amenable to jazz chordal voicing patterns such as "3-7-9" and "7-3-6."²¹

Altered chords evoke referential collections and pitch class sets, which interact and converge. Bebop chords, blues scales, and modal collections are included in this interaction. Altered chords, referential collections, and pitch class sets interact in a variety of contexts. Altered chords thrive regardless of the degree of the surrounding centricity. As a result, they

²⁰ A Ligeti signal is "a fourth made up of a minor third and a major second or the other way around." The presence of similar structure in music that predates Ligeti demonstrates similar compositional thinking among post-tonal and jazz composers which resulted in the onset of musical space, an advanced form of counterpoint. A similar phenomenon is observed with the existence of twelve-tone music that predates Schoenberg. Ligeti is in no way the originator of musical space. However, the use of his labels are beneficial.

Richard Toop, Gyorgy Ligeti (London: Phaidon Press Ltd., 1999), 173.

²¹ These dominant comping gestures are often voiced according to a "3-7-9" pattern, a tritone plus a major third, which usually alternates with the "7-3-6" pattern, a tritone plus a perfect fourth. Steve Dancz, *Jazz Improvisation* class lecture, University of Georgia.

often evoke mutiple meanings, such as in Bolcom's "Premonitions." In fact, idiomatic jazz harmonies often act as agents of "tonal allusion" in an otherwise post-tonal atmosphere. These interactions can occur in the same contexts as bitonality and 12 tone rows – as observed in Bartok's *Contrasts* and Berg's *Lulu*, respectively. In addition, in works such as Stravinsky's *Tango*, altered chords, referential collections, and pitch class sets have been woven into contrapuntal textures. They seemingly emerge naturally from the counterpoint. These pitch materials have also been incorporated into Bach recompositions.

Among the harmonic convergences are allusions to nineteenth century style in the form of Neo-Riemannian progressions and Cohn's promissory notes. Neo-Riemannian progressions, along with non-functional progressions, occur in a variety of contexts, howbeit jazz, post-tonal, or contrapuntal. These progressions are often integrally linked to a larger motivic organization such as intervallic motives. Neo-Riemannian progressions also interact with row forms such as in Berg's *Lulu*. They are also encountered in contrapuntal contexts such as Gershwin's "Crap Game Fugue."

Promissory notes are indeed participants in the interactions between post-tonality, jazz, and counterpoint. The behaviors exhibited by individual pitches are often microcosms of larger key conflicts and relationships, such as those found in Debussy's *Golliwog Cakewalk* and Joplin's "Maple Leaf Rag." These "promissory notes" interact with altered extended chords, motivic sonorities, blues collections, and bitonal structures/organizations such as in Gershwin's "Mine." As they are annexed by the jazz idiom they acquire a syncopated profile. They are also are incorporated into contrapuntal textures such as the fugue from Milhaud's *La Creation du monde*.

The motivic convergences present in this paradigm exist largely in the form of jazz licks. Jazz licks are indeed carriers of the jazz-blues language, scalar collections and harmonies. Therefore, jazz licks are to be considered vehicles of stylistic allusion as well. Jazz licks are self-contained units or cells that are repeated, altered, fragmented, inverted, combined and expanded. At times, these variation processes are expressed in ways that are unique to the jazz style. Included among those idiosyncrasies are syncopation, dotted rhythms, articulation, phrasing, note bendings or inflections, glissandos, and motivic thirds/sixths. In the course of their variation, jazz licks are incorporated into pitch class sets. As they are intergrated into pitch class set activity, Straus' revisionary ratios of motivicization and generalization are at work. ²²Examples of such an immersion into pitch class sets are found in Stravinsky's *Ebony* Concerto. In addition, these variation processes result in variants with an array rhythmic configurations and metric placements. Recurrently, the variation of jazz licks emulates the verve of jazz improvisation. In works such as Milhaud's La Creation du monde, bent and inflected notes are verticalized – thereby, creating cross relations in the texture. Jazz licks also are acquiescent to a myriad of contexts including tone row post-tonality and the fugue. In fact, Bolcom's "Summer Dreams" demonstrates how jazz licks are subject to manipulation to the point of obscurity by devices such as octave displacement and competing tone centers – just to be restored moments later.

The contrapuntal convergences that have emerged in this study involve stylistic allusions to Western contrapuntal technique and forms, as well as, modeling in the form of Bach recompositions. These allusions to Western counterpoints are, in turn, combined with the contrapuntal techniques associated with jazz and African-American music, including collective improvisation and "call and response." The result is both a transformation of contrapuntal

²² Straus, 17.

technique as well as the definitions of counterpoint. The works in this study demonstrate that counterpoint itself is not a static form. Counterpoint can exist in various states and stages. Like the parameter of pitch, counterpoint has been emancipated. Even the conception of what constitutes counterpoint is subject to revision. In this study, counterpoint manifests as a spectrum: from traditional fugue to contrapuntal processes divorced from contrapuntal form to the complex layers of linear counterpoint to even the beginnings to micropolyphony and musical space. Bach recompositions themselves exist in a vast array from nearly faithful Baroque style renditions to renditions exhibiting revisionary ratios such as centralization.²³ Moreover, counterpoint is no longer subjugated by the confines of conventional tonality. Counterpoint is now colored by jazz licks, pitch class sets, referential collections, jazz-blues collections, tonal ambiguity, bitonality, and post-tonal modality. It has also merged with dance and popular forms such as ragtime. It is in counterpoint's merger with other styles that its propensity for changing states and stages is the most pronounced. In works such as Hindemith's "Ragtime" from Suite 1922 and Tatum's "Jitterbug Waltz," there is a shifting distinction between countermelody and accompaniment as well as between melody and countermelody. Moreover, jazz musicians, such as Miles Davis and Gershwin, appropriate contrapuntal devices; such as oblique motion, gap-fill gestures, voice exchange, cross-relations, canon, and compound melody for their own purposes.

²³ Joseph N. Straus, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge: Harvard University Press, 1990), 17.

CHAPTER 7

TOWARD A TAXONOMY OF FORMAL CONVERGENCES I

In his article "The Uses of Existing Music: Musical Borrowing as a Field," Burkholder

states:

In my own more modest study of Ives' methods and their development, getting the taxonomy right has been crucial for understanding the evolution. I could not have understood how his borrowing procedures developed until I could distinguish between different procedures. Once I did so, I began to see how they are related, how they draw models and methods in the music of other composers and what aspects of each are distinctive or new.¹

Burkholder maintains that assembling a classification system was integral to his

understanding of the Ivesian compositional paradigm. He created a taxonomy of borrowing procedures or functions which embodied the ideas behind Ives' compositional style. Creating

this taxonomy enabled him to see how they evolve or change over time, as well as, how they

relate to models and methods of other composers.

Taxonomic classification is a natural part of music theoretical inquiry. Per F. Broman asserts that "many philosophers of science are actually indirectly describing the working process of a music analyst." ² Broman adds: "…music theory not only resembles scientific theory with regard to methodology, but also that the kinds of problems and methodological hazards philosophers of science have encountered in the natural sciences relate to music theory."³ Taxonomies are prevalent in the field of music theory. In addition to Burkholder's taxonomy and

¹ Burkholder, 856.

² Per F. Broman, "Music Theory, Art, Science or What?," in *What Kind of Theory Is Music Theory?:*

Epistemological Exercises in Music Theory and Analysis, eds. Per F. Broman and Nora A. Engebretsen (Stockholm: Stockholm University, 2007), 17.

³ Ibid., 18.

Straus' revisionary ratios, taxonomies appear in species counterpoint, pitch class set theory, Schenkerian theory, Neo-Riemannian theory, and Straus' atonal voice leading models. Within each of these analytical systems, visual models and classifications serve as a point of departure for analysis. It is in the context of a musical work that a musical structure or relationship, such as pitch class set or a Neo-Riemannian label, becomes animated, evolves, and evokes connections with other musical works.

In this study, taxonomic classification provides information that the previous study of convergences cannot. The study of harmonic, motivic, and contrapuntal convergences focuses on the localized events and organizations appearing concurrently in individual works. However, the individuality of musical works does not lend itself to discerning compositional types. This is likened to being able to examine the trees of a forest up close without the ability to gather much information about the forest as a whole. A taxonomic classification, on the other hand, focuses on the global connections of form, style, and signs. These global connections of form, style, and signs, subsume the convergences that result from stylistic allusion. This is likened to an overhead view of a forest or several forests within an ecosystem. Form, style, and signs form are generalized categories that reveal the overall structure of the proposed paradigm.⁴ Moreover, the taxonomic classification of these generalized categories provides a context for their evolution.

The interaction between these three musical styles created a body of works which fall into the following taxonomic categories: the misreading of the fugue; the misreading of jazz dance forms or hybrid dance types; the misreading of "musical style" itself; and the misreading of jazz harmony and gesture. The misreading of fugue occurs as this traditionally Baroque form

⁴ In the field of philosophy of science, Scott Kleiner asserts that taxonomies are an integral part of paradigms: "Paradigms, contain, among other things, a schema that represents the basic causal-explanatory objectives of a scientific discipline at some point in its history...Paradigms can include taxonomies as well as causal schemata; I might go as far as to say they must have a taxonomy and can differ as to criteria for classification." Scott Kleiner, "Kuhnian Paradigms," (lecture, University of Georgia, Athens, GA, April 2010).

is combined with post-tonality and the jazz idiom. The misreading of jazz dance form and rhythm occurs as counterpoint and the dance collide with post-tonality and classicism. The misreading of "musical style," itself, results in passages characterized by stylistic metamorphism, juxtaposition, and ambiguity. The misreading of jazz harmony and gesture happens as these structures coexist with post-tonal procedures and within various states of counterpoint.

Table 7-1: Taxonomy of the Post-tonal, Jazz, and Counterpoint Paradigm



Each of these four occurrences can be treated as a compositional category or taxon. Each compositional taxon is populated by member compositions that illustrate the same phenomenon. The misreading of the fugue results in hybrid fugal forms as evident in the following works: Villa-Lobos' fugue from *Bachianas Brasilieras No. 1*, David van Kriedt's *Fugue on Bop Themes,* Gershwin's *Porgy and Bess,* Milhaud's *La Creation du monde,* Loussier's fugues, Brubeck's *Chromatic Fantasy,* and Powell's "Tempus Fugue It."

The misreading of jazz dance forms and the parameter of rhythm results in hybrid dance forms as found in the following works: Tatum's "Jitterbug Waltz," Stravinsky's *Ragtime* and *Tango*, Hindemith's ragtime works, Bolcom's "Rag Inferno," selected Davis Cool School recordings, Gershwin's "I've Got Beginners Luck," Loussier's Gavotte in B minor, Villa Lobos' *Kankikis* from *African Dances*, and Berg's *Der Wein* and *Lulu*. The misreading of style itself; which results in style being used as an expressive device⁵ rather than as convention; is observed in the following works: Bolcom's Second Sonata, Lewis' recomposition of Bach preludes, Powell's recomposition of C.P.E. Bach's *Solfeggietto*, Ives' *Thoreau*, Ellington's *Concerto for Cootie*, and Berg's operas such as *Lulu* and *Wozzeck*.

Misreadings of jazz harmonies and gestures are encountered in the following works: Bartok's *Contrasts*, Stravinsky's *Tango*, Brubecks' *Points on Jazz*, Loussier's works, Berg's *Lulu*, Bolcom's Twelve Etudes, Villa Lobos' works, Ives' "Thoreau," Hindemith's ragtime works, Milhaud's *Trois Caprices*, Gershwin's *Porgy and Bess* and Tatum's works.

In this study, the member compositions of each compositional taxon will be arranged paradigmatically as a result of the findings of the comparative analysis. Some compositions can be discussed in more than one context of more than one taxon. This aspect of the compositional taxonomy set forth illustrates what Marc Ereshefsky calls "taxonomic pluralism" in taxonomic theory.⁶

Misreadings of the Fugue

In order for a musical work to be considered a misreading of the fugue, it must adhere largely to the fugal form, make reference to the fugal process, or both. There are three subcategories within this taxon: content integration, recomposition, and formal dissolution.

⁵ J. Peter Burkholder, "Style Contrast as a Formal and Expressive Device in Early Music" (paper presented at the annual meeting of the Southern Chapter of the College Music Society, Memphis, TN, February 25, 2011). ⁶ Marc Ereshefsky, "Species, Taxonomy, and Systematics," in *Philosophy of Biology: An Anthology* (Oxford: Blackwell Publishing Ltd., 2010), 255.




Misreadings of the Fugue

Within the first subcategory are those compositions that infuse the fugal form with content based on another style and/or diverse pitch materials. These compositions known for their content integration are characterized as simple and complex. The complex examples, such as Milhaud's *Creation du monde* and Gershwin's "Crab Fugue," are known for higher levels of experimentation with their parameters and the form. It is in the most complex compositions that insight is gained into the final contrapuntal frontier – musical space. The simpler examples, as represented by the fugue from Villa Lobos' *Bachianas Brasilieras* No. 1 and Kriedt's *Fugue on Bop Themes*, do also make a departure from the form. However, in comparison with the other examples in this study – they are the most faithful to the traditional form.

The second subcategory consists of recompositions of an existing fugue. These compositions are identified by the following classifications: quotation and comment, juxtaposition and synthesis, and compositional essay. The first classification within this subcategory is represented by Loussier-Bach's fugue in D major, in which quotations are followed by free jazz extemporations. Juxtaposition and synthesis, as represented by Loussier-Bach's *Toccata and Fugue* involves a stylistic counterpoint between the learned fugal style and jazz. It differs from the previous classification in the liberties that are taken with the quotation. Moreover, the interaction between the two styles is more involved undergoing numerous developmental changes. Compositional essays, which are represented by Brubeck's Chromatic *Fantasy Sonata*, differ from the others in that the line between the learned fugal style and jazz are not as clearly drawn. In this category, the reference is more "in spirit" more so than in quotation. In Burkholder's classification system this work can be considered a paraphrase. Brubeck's fugue differs from that of Villa Lobos' Bachianas Brasilieras No. 1 because of its reference to a specific work in the title. The Villa Lobos' fugue, on the other hand, makes no such reference and therefore cannot be considered as a recomposition.

Lastly, the final subcategory, which is represented by Powell's "Tempus Fugue It," is known as formal dissolution. Here, the essence of the fugal form has essentially been reduced to a title and a melody. Although the formal mores have been undermined, the fugal melody is still subjected to development within in a different stylistic context.

Although the focus of this taxon is formal, each subcategory represents an infusing of the traditional form with the trappings of post-tonality and jazz in varying degrees ranging to the most extreme. Hence, characteristics such as pitch, rhythm, and meter will be highlighted as they populate this form. This provides optimum insight into the intersections of these three idioms.

In addition, connections will be periodically drawn to other works and the compositional techniques of other composers thereby illustrating the unity of this paradigm. The ways that individual works interact and depart from the traditional form will be highlighted as well as how jazz and post-tonality are integrated into this form

Misreadings of the Fugue: Content Integration: Simple Types

Villa-Lobos Bachianas Brasileiras nr.1 Fugue (Conversa)

The title of this work and others in this series indicates the intent for a misreading or revision of Bachian artistry. The title also posits the image of a Brazilian Bach taking his place alongside Hindemith's "twentieth century Bach." Or perhaps, rather, Hindemith's "twentieth century Bach" may also be conversant in Brazilian idioms. Incidentally, like ragtime and jazz, the idioms of Brazilian music are also indebted to their African roots – thereby, establishing a kinship between Brazilian music and the ragtime-jazz idiom. In fact, Carol Lems-Dworkin asserts that the rhythms of dances in the African diaspora are often interchangeable.⁷ As a result, African-influenced Caribbean and South American dances such as the tango had a definitive role in the evolution of early jazz. A comparison of the characteristic rhythms of ragtime (proto-jazz) and those of the tango testifies to this close relationship (see example 7-1):⁸

⁷ Carol Lems-Dworkin, *Africa in Scott Joplin's Music* (Evanston, IL: Carol Lems-Dworkin, 1991), 22. Dworkin states: "Even though the cakewalk, tango and habanera use entirely different dance steps, they nevertheless share the same basic, underlying rhythm, no matter whether their associated musics are fast or slow." The term of "proto-jazz" has been borrowed from Krin Gabbard.

- http://www.oxfordmusiconline.com/article/grove/music/jazz (February 2012).
- ⁸ Edward A. Berlin: 'Ragtime,' in Grove Music Online. Oxford Music Online,

http://www.oxfordmusiconline.com/article/grove/music/ragtime (accessed February 2012).

Gerard Behague: 'Tango,' in Grove Music Online. Oxford Music Online,

http://www.oxfordmusiconline.com/article/grove/music/ragtime (February 2012).



Example 7-1: Comparison of ragtime and tango rhythmic patterns.⁹

It is for that reason that this work is included in this compositional paradigm which engages post-tonality, jazz, and Baroque-inspired counterpoint. There are distinct ways in which this movement interacts and departs from traditional Baroque-inspired counterpoint. In this study, the Brazilian idiom along with the South American tango and ragtime will be treated as examples of proto-jazz. Villa-Lobos' inclusion of a fugal movement in this work is only fitting, since one of the hallmarks of the Bachian-Baroque aesthetic is the fugue.

One of the distinguishing features of this fugue in G minor is its use of a syncopated subject cast in the characteristic rhythms of both South American dance and ragtime. Hence, this fugue can certainly be representative of Hindemith's vision of a "twentieth century Bach" who incorporates contemporary dances into his contrapuntal art. This work is at once a misreading of proto-jazz and fugue. However, it is this work's adherence to the fugal form that warrants its inclusion in this taxon. See the chart below for subject entries, motivic development, and key structures. The motives of this fugue have been assigned letter names. Free counterpoint is indicated by wavy lines.

⁹ Ibid.

m.1		5		9		13		18	2	21	3	1 3	34	
S	S		~~	~~	~~	~~	~~			S		S2	b	
Α			S			~~	~~		Fe		S2		b	
Т					S		~~				S2		~~	~~
B							S					S	~~	~~
20	Gm		Cm		Fm		B-flat n	nixo		Cm		Cn	n	
m.39		40	5 4	7 5	0	5	8 6	0	64	4		_		
S	a+b		a+b	S2	Х		S2				~~			
Α	a+b		a+b	Х	Х			S 2		a+b	~~			
Т	a+b		a+b	Х	Х		~~	~~	~~		~~			
B	a+b		~~	~~	~~	~~	~~	~~	~~	a+b	~~			

Table 7-3: Fugal Entries in Villa Lobos Fugue from Bachianas Brasilieras No. 1.

There are several aspects of this subject that makes it unique to the fugal genre. Firstly, there is the sixteenth-eighth-sixteenth figure, labeled as motive x, that is characteristic of proto-jazz rhythmic patterns.

In addition to the syncopated rhythm employed, this subject is also unique in its initial prolongation of an upper neighbor, scale degree two (see example 7-2). Nevertheless, in keeping with Bachian artistry, this prolonged upper neighbor partakes in a long-range stepwise ascent to scale degree four. This prolongation has some unique consequences harmonically, including the VII chord on the downbeats of the initial entries. Also, what is unique about this subject is its sequential construction which undermines its harmonic stability. Another echo of Bachian artistry is found in the tail of the subject which implies two simultaneous lines of a compound melody.



Example 7-2: The fugal subject from Villa Lobos *Bachianas Brasileras* No.1.

Another distinguishing feature of this fugue is its second subject, which appears in measure 9 in the key of F minor. It cannot be considered a countersubject because it does not appear with the subject consistently. This second subject is characterized by its dotted rhythm and octave displacement which is treated sequentially. Moreover, the episodic passages of this fugue are based more on this second subject than the first subject. The dotted rhythms found in this second subject, episodic passages with jazz "licks", and free counterpoint are also a reference to the proto-jazz idiom (see rhythms in example 7-1). With the addition of a third line, we see that these melodic lines are linearly conceived not adhering to functional progressions.

Another feature that makes Villa-Lobos' fugue noteworthy is its inclusion of post-tonal modality. In measure 13, there is an entrance of the subject in B-flat mixolydian. In measure 13, there is an additional melody that is seen only once. Like the subject it has a long range ascending contour of a fourth. It contrasts with the other melodic lines with its longer note values, and its lyricism in the upper range. In measure 17, the second subject appears in augmentation while leading into a false entry in A-flat major accompanied by an E-flat pedal. This false entry is rhythmically displaced beginning on beat two. By the second measure, its contour deviates from the original pattern.

David van Kriedt Fugue on Bop Themes

Both Dave Brubeck and David van Kriedt studied with Milhaud.¹⁰ In essence, this song can be considered as a bebop counterpart to Milhaud's *Creation du monde*. In addition to being performed by the Dave Brubeck Octet, it was also performed by the Paul Desmond Quintet. The following is an excerpt from the liner notes written by Paul Desmond:

...in the fugue, the subject makes the rounds of trumpet, alto and tenor, is followed by a divertimento based on a fragment of the the subject (a particularly charming one in this case, since the subject begins and ends in $\frac{3}{4}$, and this development of it amounts to a pocket size waltz thru which the jazz beat goes ahead on) now comes back the subject in the relative minor, making the rounds in reverse order with the entrances coming closer together, then another divertimento leads into what would ordinarily, in the career of properly reared fugue, be the pedal – a point at which one tone is sustained by the bass and things happen on top. This being a jazz fugue, the pedal is replaced by short choruses from tenor and alto, after which a series of strettos (periods in which the subject and answer are brought progressively closer and closer together), separated by short divertimentos, lead eventually to the concluding real stretto, which in this case is a heavily emphasized statement of the subject.¹¹

As Desmond's term "jazz fugue" indicates, this fugue is a departure from the traditional fugal form. Its subject is marked by syncopation and dotted rhythms. What follows in example 7-3 is a transcription of the opening measures of this fugue.



¹⁰ Crist, *Bach Perspectives 5*, 211.

¹¹ Paul Desmond, "The Paul Desmond Quintet – October 1954 Fantasy," The Paul Desmond Quintet Website (Discography Listing). http:// www. puredesmond.ca/quintet.htm accessed December 2011).



Example 7-3: Opening from Kriedt Fugue on Bop Themes.

The defining attributes of this bebop theme in question include the characteristic bebop scalar passage work, jazz phrasing, dotted rhythms, and syncopation. In comparison to the traditional Baroque fugal subject, its tessitura is expansive falling short of two octaves. The subject is also a departure harmonically as the second half transcends from B-flat major to the parallel minor. The "short choruses" and "divertimentos" that Desmond refers to are essentially stylistic modulations to bebop. Essentially, this fugue is characterized by a frequent juxtaposition of styles. In spite of this departure from traditional fugal form, this work still is considered a fugue due to its adherence to key entries and contrapuntal processes.

Misreadings of the Fugue: Content Integration: Complex types

Gershwin Porgy and Bess: "Crap Game Fugue"

This fugue, which occurs during the fight scene of *Porgy and Bess*, is primarily carried by the instruments with strategic doublings by the voices. Harmonic structure is an important aspect of Gershwin's revision of the fugal form. The "Crap Game Fugue" opens with the subject accompanied by free counterpoint in the form of parallel third dyads as well as sixths. This emphasis on minor thirds is one of Gershwin's trademarks. There is a duality between the tonic G minor harmony of the free counterpoint and the prominence of the dominant pedal, D, within the subject. The subject itself is very complex. It is a compound melody implying two additional lines that converge (see example 7-4). Also within this compound melody, there are motivic intervals such as the second, third, fourth, tritone, and fifth. The leading tone, the minor seventh and the raised sixth scale degree of G minor are present in the subject. The harmonic colors generated by the simultaneities include: G minor with a raised 7th (m. 1 and 3); and D7 with a lowered fifth and a raised 9th (m. 2). Moreover, included in the last half of the subject, is note C-sharp (spelled as D-flat) from the G blues collection. Gershwin's incorporation of jazz harmonies into the fugal medium recalls the unconventional species counterpoint exercises he completed for Cowell riddled with ninths.



Example 7-4: Gershwin "Crap Game Fugue" from Porgy and Bess, opening measures.

Below are the subject entries and key structures:

Table 7-4: Fugal Entries in Gershwin "Crap Game Fugue" from Porgy and Bess.

r	n.1			7	1	13		23	2	27 2	31	36		42
G	1	<u> </u>	0	<u> </u>		<u> </u>	<u> </u>	1	<u> </u>	<u> </u>	1	00	1	
S			S	~~	CS		~~	~~	~~	~~	~~	CS	~~	
Α	S		CS	~~	CS		~~	~~	~~	~~	~~	~~	~~	S
Т	~~	~~	~~	~~	~	~~	~~	~~	~~	~~	~~	S		~~
B							S		~~	~~	~~	~~	~~	CS
	•		•		•									
Gm:	i			v		i		v				vi		iii
												(natural)	(natural)
pedals	s: D			А		D		А				В		
2	48	:	54											
S	~~		~~			~~]							
Α		~~			~~	~~								
Т	~~	fe	~~	fe		~~								
B		~~	~~	~~		~~								
L							-							
Gm:		vi		ii		vii								
		(raised)												

pedals:

Е

As indicated by the table, passages between fugal entries consist primarily of free counterpoint. However, episodic development does not figure as prominently. The absence of motivic development is another distinguishing feature of this misreading of the fugal form. Episodic development is replaced in this misreading by free counterpoint utilizing the intervallic motives and their expanded form as pitch class sets.

The passage found in measures 14-17, is representative of the layers of complexity present in this fugue – another hallmark of Gershwin's misreading (see example 7-5). As the theme returns in G minor, the tonic harmony is embellished with a flattened fifth from the G blues collection, D-flat. The resulting harmony is a G minor raised 7th chord with a lowered fifth. Moreover, the three-note gesture in the top voice {D-flat, C, B-flat} outlines a motivic interval of a minor third. As this passage ensues, there is an arpeggiation of the B-flat major triad in the bass. Along with the subject, there is a continuous overlap and rhythmic conflict between three-note gestures in the texture.



Example 7-5: Gershwin "Crap Game Fugue," measures 14-16.

The Neo-Riemannian progression found in measures 31-32 is another feature of this fugal misreading although indeed a precedent had been set for Neo-Riemannian progression in traditional fugues. In "Notes on the Opening of the F-sharp minor fugue from WTC I," Lewin analyzes a traditional Bach fugue from a Neo-Riemannian viewpoint, highlighting

transformations of set [013].¹² This precedent for Neo-Riemannian progression occurs on the melodic or motivic level whereas the Gershwin misreading transcends the realm of motivic transformation, exploring third relations among triadic structures. Thereby, this fugal misreading alludes to the harmonic language of nineteenth century music.

A final example of Gershwin's jazz and post-tonal harmonic revisions of the traditional fugue is found towards the end of this scene, beginning in measure 67. This bitonal chord formation is also evocative of Milhaud's polytonality – thereby demonstrating the unity of the compositional paradigm.

Milhaud Creation du monde: Fugue, Op. 81

The fugue from *Creation du monde* is a quintessential example of the intersection of post-tonality, jazz, and counterpoint. Previous to the completion of this jazz ballet in 1923, Milhaud had been studying jazz and the blues very closely.¹³ Deborah Mawer describes this ballet as "the synthesis of jazz/blues procedures and neoclassical modality."¹⁴ She describes the fugue as "the ultimate synthesis of jazz and Bachian techniques:" ¹⁵

in *La Creation du monde* where, as a founding principle of the work modal partitioning governs the entire thematic structure, and where, in the specific context of the Fugue, the structure of the fugal device is inseparable from Milhaud's handling of blues modality.¹⁶

Milhaud himself stated that his objective was to portray how jazz's "melodic lines, punctuated by the percussion, overlapped in a breathless counterpoint of broken and twisted rhythms."¹⁷ Hence, for this work, Milhaud's contrapuntal model came both from classic jazz and Bach. Regarding the synthesis of jazz and the Baroque idiom, Milhaud adds:

¹² David Lewin, "Notes on the Opening of the F-sharp minor fugue from WTC I," *Journal of Music Theory*, Vol. 42, No.2 Neo-Riemannian Theory (Autumn 1998): 235-9.

¹³ Mawer, 147.

¹⁴ Mawer, 149.

¹⁵ Mawer, 126.

¹⁶ Mawer, 252.

¹⁷ Mawer, 147.

La Creation du monde provides probably the finest example of synthesis: '*j'utilisai le style jazz sans reserve, le melant a un sentiment classique*' [I used the jazz style unreservedly, blending it with a classical feel] although one might argue, more appropriately, in favour of a baroque 'sentiment'...¹⁸

Here, Mawer acknowledges the affinity that exists between the idioms of post-tonality, jazz, and Bach inspired counterpoint.

Milhaud's misreading of the fugal form involves the institution of multiple layers of increasing contrapuntal complexity. Among the layers observed in this movement include: traditional contrapuntal processes, the centralization of blues inflections, the activity of pitch class sets, the layering rhythmic pulses, motivic intervals, improvisatory-like gestures, modal collections, referential collections, and competing tonal centers. The contrapuntal overlap of these layers anticipate the complexities of unitary musical space.

Mawer divides this fugue into the following sections: Exposition m. 1-21, Middle Section m.22-43, and Final Section (Recapitulation) m. 43-58. Table 7-5 shows the subject entries and key areas. As indicated by the wavy lines, free counterpoint figures prominently in this revision of the fugue.

24 28

29

43

34

Table 7-5: Fugal entries from Milhaud La Creation du monde.

13

8

S			S		CS		~~	fe	S			~~
Α					S		~ ~	~~	~~	~~	~~	~~
Т		S	 CS		~	~	~	~~	~	~	~~	~
В	S	 CS	 ~	~~	fe	~~	~~	~~	~~	~~	~~	~~
Dm:	i	ii	v		VII				iii			
Pedal	:	В			А							

18

¹⁸ Mawer, 273.

In an analysis of the *Suite de concert*, she identifies blues collection on D as the source of the pitch material. Moreover, she points out that the pitch inflections encountered in this piece are the very hallmarks of the blues: "This is a classic illustration of the flexible blues collection of pitches that allows major/minor inflections and microtonal 'bending', particularly of the third and seventh degrees."¹⁹ These pitch inflections such as F-sharp/F and C-sharp/C rise to motivic significance throughout the fugue. The inflections are perpetuated both melodically and vertically between voices. As stated earlier, the behavior of these inflections bears a great similarity to Edward Cone's "promissory notes."²⁰ Moreover, the assignment of structural significance to these inflected pitches of the blues scale is an indicator that the revisionary ratio of centralization is at work. According to Straus, centralization is a phenomenon that occurs when an otherwise peripheral element from an earlier work, or in this case an existing style of music, is granted structural significance.²¹ Moreover, the superimposition of the blues idiom creates an added dimension for the traditional fugal form.

Among the motives in operation in this piece are the pitch inflections of the 3rd and 7th degrees, motives from the subject and countersubjects, and transformations of sets [0124] and [02347]. In addition, melody takes precedence over harmonic considerations in both Milhaud's music and jazz.²² The texture of this fugue becomes increasingly complex as there is a layering of motives on top of fugal entries and episodes. The increasingly complex texture culminates in a continuous overlap of instrumental lines. This complex layering of contrapuntal activity mirrors

¹⁹ Deborah Mawer, *Darius Milhaud: Modality and Structure in Music of the 1920s* (England: Scolar Press, 1997), 155.

 ²⁰ Edward T. Cone, "Schubert's Promissory Note: An Exercise in Musical Hermeneutics," *19th-Century Music*, Vol. 5, No. 3 (Spring 1982): 233-241.

Promissory notes are individual pitches which acquire motivic significance in a given piece. Often, these pitches are in conflict with competing pitches as well as chromatic alterations of themselves. In this article, Cone asserts that these musicological conflicts coincide with biographical narrative of the composer.

²¹ Joseph N. Straus, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge: Harvard University Press, 1990), 17.

²² Mawer, 149.

the characteristics of collective improvisation of early jazz as well as the post-tonal conception of musical space. The activity of these pitch class sets constitutes an added layer of complexity, which is the essence of Milhaud's revision of fugue. The inclusion of post-tonal modality is another marker of Milhaud's misreading of the traditional fugue. Meanwhile, layers of complexity continue to be perceived as well as a sense of progression within every parameter.

Another aspect of Milhaud's revision of the fugal form is evident in passages beginning in measures 24-25. Although the countersubject is present, the subject is not, thereby identifying this passage as a developmental section. In the interim, the F-sharp – F conflict resurfaces as D major and D minor triads are being played simultaneously in the violins. There are two concurrent realms of centricity as chordal progressions and bass lines in C contrast with the trappings of D centricity. Harmonic duality exists on two levels as localized major-minor duality in the strings and a larger scale conflict between competing tonics. This harmonic duality is in keeping with the character of a turbulent, transitional middle section. This harmonic duality also points to Milhaud's polytonal language as well as his stylistic affinity with Stravinsky. Additionally, this also recalls the third and seventh scale degree inflections as inspired by the blues scale on D.

In measures 32-43, there is another significant departure from traditional fugal form as the clarinet carries the subject in its entirety through the circle of fifths from F to C to G back to D. In traditional fugal form, motives from the subject would be fragmented before it is subjected to any developmental treatment. Concurrently, the cornet treats the head motive of the subject sequentially—beginning with B-flat then to C to D to E to F.

Misreadings of the Fugue: Recomposition: Quotation and Comment

Bach-Loussier Fugue in D major

This discussion is based on an aural analysis which compares the Loussier recording to a score of the Bach original (see example 7-6). This work is a revision in every sense of the word. The departures from the original are significant. So much so, this work cannot be considered a fugue. This misreading could very well be classified as a member of the formal dissolution subcategory. However, its designation by the composer as a recomposition of the original D major fugue, necessitates its examination in the light of other recompositions of existing fugal works.

Loussier's recomposition is essentially a performed analysis. The motivic elements he highlights is very studied. His jazz sensibility comes through in how he molds the material of this fugue. Although this fugal misreading results in the editing of the original twenty-seven measure fugue down to a fourteen measure "head" arrangement for jazz ensemble; the essence of the original fugue is still conveyed. Straus' revisionary ratio of centralization can be observed throughout as selected elements are conferred even greater structural significance than in the original work.

Loussier's revision is evident from the very first measure as the head gesture is initially isolated played by the piano alone. In contrast, the descending tail motive is emphasized by the entrance of the entire ensemble and a harmonization that features the bass below in parallel tenths. The tail motive is also emphasized by rhythmic augmentation.



Example 7-6: Bach Fugue in D major, Book One.

Signs of the revision continues as the appearance of the answer is delayed by a pause on an interpolated E major chord, dominant of the dominant. In fact, the first half of the arrangement is performed in rubato by the entire ensemble. Loussier's rubato interpretation is supported by Tovey's analysis which identifies the slower French overture style as a possible influence on this Bach fugue. The interpolated E major chord features note G-sharp which is of motivic importance in both the prelude and the fugue. The motivic significance of note G-sharp is greater in the prelude which culminates with a G-sharp pedal in measures 30-31. Unlike the original fugue which does not introduce the note G-sharp until measure 5, it appears earlier in the Loussier revision on the first beat of the second measure harmonized, and punctuated by a pause. Incidentally, the G-sharp creates a tritone with the tonic pitch. Its emphasis here is fitting for a superimposition of the jazz idiom.

After presenting the answer and cadencing in the dominant, Loussier boldly elides the downbeat of the third measure with the downbeat of the sixth measure. This is possible because the downbeats of both measures feature the dominant harmony. At this point, the ensemble comes enters in a fast and steady swing. The piano part weaves itself effortlessly between the soprano line and Bach's inner voices – highlighting downward leaps of a fifth and diminished fifth. Loussier then places a fermata on the downbeat of measure 8. In the next measure, as B minor is tonicized, Lousiser weaves the melodic line into an inner voice emphasizing the voice leading from leading tone to tonic. This flows seamlessly into a sequential passage that transitions from B minor to A major to G major. Thereby, this revision highlights a series of tonicizations whose root movements mirror the descent of the tail motive emphasized in the opening. Loussier inserts two more points of repose in measures 11 and 12. In the latter instance, Loussier inserts F-sharp minor harmony. From there, the melody and the bass move in parallel tenths which culminate with the concurrent bass arrival on C-sharp and the soprano move to an interpolated G-sharp. Immediately from measure 13, Loussier cuts to the last four measures of the fugue (see example 7-7).



Example 7-7: Bach Fugue in D major, Book One, measures 24-26.

Here, his phrasing becomes idiomatic and syncopated, emphasizing the movement from sixteenth to dotted eighth rather than from dotted eighth to sixteenth. This emphasis highlights

the fact that the tail motive has been inverted and treated sequentially. Moreover, the last three measures also serve as a bridge between each solo section.

Let us take a moment to consider how solo improvisation is utililized in this jazz "head" arrangement of a Baroque fugue. The harmonies for the solo choruses remain unchanged coinciding with Loussier's revisions of the original melodic material. Loussier's first solo happens over a fast swing and an extemporizing bass. The two instruments continuously interact contrapuntally. The second solo is over a leisurely swing, as a walking bass line comes to the forefront. The final solo section is a fast swing. After the final solo section, Loussier exploits the cadential six-four by superimposing an E-flat chord over the dominant pedal – which is evocative of the moments of repose encountered in Coltrane's *Lonnie's Lament*. The final repetition of Loussier's head begins with a brief double bass solo reflecting the jazz aesthetic. The final chords are played faithfully, repeated, and phrased in a manner which recalls the grandiose endings of Bach's organ works.

Misreadings of the Fugue: Recomposition: Juxtaposition and Synthesis

Bach-Loussier Toccata and Fugue in D minor

Although this is a recomposition of Bach's toccata and fugue in D minor fugue, Loussier is very selective about his use of counterpoint. He is more interested in the thematic material and its motives than anything else. Loussier successfully marries the jazz idiom with the fugal form in two ways: by superimposing jazz harmonies and rhythms; and by juxtaposing the two styles. The jazz harmonies employed in this fugue are also resonant with the referential collections from post-tonal language.

A comparison of the fugal charts for both the Bach original and the Loussier recomposition in Table 7-6 reveals similarities and differences.

Table 7-6: Comparison of Bach Fugue in D minor and Bach-Loussier Fugue recomposition.



They share most of the same key areas and motivic material. However, Loussier does not follow the traditional fugal form completely with continuous counterpoint according to a formal plan. It is not a fugue in the true sense of the word. It is a Loussier misreading of the fugue. More importantly, it is Loussier employing the thematic material for his own purposes. Just as will be observed with Lewis, Loussier is in a sense playing through the Bach original and taking time to add his own jazz idiomatic addendums. This recomposition is more of a stylistic transformation than anything else. Our perceptions of style are challenged with fugue (including its stylistic and cultural implications) being used as a vehicle.

One key to Loussier's integration of Bach's stylistic language with the jazz style in this work is the equalization of the rhythm. At the heart of the jazz style is the swing feeling articulated by eighth notes. Hence, Loussier articulates the theme in eighth notes and quarter notes. The addition of the quarter note emphasizes the embedded descending line of this compound melody. This revision seems analytically based. The tail motive of the theme, previously labeled as motive x, is largely reinterpreted in a series of syncopated dotted figures. Moreover, the bass and percussion accompaniment enters at this point. Hence, Loussier has integrated jazz rhythm and color into the main theme itself—also making these elements also subject to variation. For the rest of the piece, the bass and percussion accompaniment take the place of free contrapuntal lines of the traditional fugue. At times, the bass is melodic. However, the bass more often serves as harmonic support. The percussion has a similar supporting role.

The harmonic nature of this Loussier revision is immediately evident in measure 71, three measures into the recomposed fugue. Here, the tail motive is harmonized with chromatic lines giving rise to the A dominant lowered 9th chord on beat four. Loussier is capitalizing Bach's emphasis on the dominant seventh harmony in the original. This harmony reinterpreted as an A dominant lowered 9th chord from the jazz vernacular, is also a member of the OCT 0 collection. In the final sixteenth of the next measure, there is a momentary glimpse of a D minor raised seventh chord that Loussier will use increasingly throughout the course of this fugue. This sonority which is popular within the jazz idiom is also a subset of the HEX 1 collection (see example 7-8). Incidentally, a similar minor raised seventh sonority is also encountered in Gershwin and Powell – attesting to the unity of the compositional paradigm.



Example 7-8: Loussier-Bach Toccata and Fugue in D minor, measures 71-72.

Another passage worth noting is found in measures 91-98 which corresponds to measures 43-48 of the original (see example 7-9). This passage stands out stylistically from what has come before. The jazz discourse has ceased for the moment. Bachian artistry shines through with sheer simplicity. The bass and percussion accompaniment has now become very subtle and sparse. This is a near seamless juxtaposition of the two styles. This delicately played sequential passage fits the stereotypical profile of everything that is "classical" and Bach. Although Loussier articulates this passage in eighth notes and quarter notes versus Bach's original sixteenth notes, the two melodic lines of this compound melody are readily recognizable. Again, Loussier's rhythmic reduction makes a greater distinction between the two melodic lines. Here is an A pedal set against a potential second subject constructed out of segment y 2 and a figure from measure 14 of the prelude.



Example 7-9: Loussier-Bach Fugue in D minor, measures 93-104 (reduction).

In measures 99-105, there is a juxtaposition of Loussier's jazz tail motive and delicate contrapuntal passages from the original. In measures 102-105, the texture again is sparse as the piano and the bass indulge in imitative exchange. In measures 106-11, there is the impression of a conventional jazz piano solo complete with comping gestures, walking bass, and percussion accents. The melodic material is loosely based on measures 49-52 of the original. This is truly a revision in every sense of the word. Measures 123-144 provide additional insight into this Loussier misreading. In measures 123-126, Bachism and jazzism coexist in a different form. As the piano left hand performs the tenor entry, the right hand maintains comping gestures of seventh chords against a walking bass line. In measures 132-136, which correspond to measures 66-7 in the Bach original, simplified counterpoint in the piano cohabits with the idiomatic gestures of a jazz rhythm section. There is a counterpoint of style as well as a counterpoint of pitch. Each style seems autonomous, occupying its own space – yet interacting with the other style. These entities can be characterized as style masses which are comparable to the concept of sound masses.²³ In measures 137-144, jazz gestures and Bachian gestures alternate as if in dialogue with one another. This passage is episodic in nature featuring sequential treatment of each opposing gesture.

Misreadings of the Fugue: Recomposition: Compositional Essay

Brubeck Fugue from Chromatic Fantasy Sonata (1993)

This Brubeck misreading is for the most part a recomposition in name only – evoking the spirit of Bachian artistry as displayed in the original rather than engaging specific motivic material. This profound departure is redolent of the revisionary ratio of marginalization. The title implies a merger of the Baroque and Classical aesthetics. It is a four movement work which

²³ Edgard Varese and Chou Wen-chung, "The Liberation of Sound," *Perspectives of New Music*, Vol.5 No.1 (Autumn-Winter, 1966): 15.

includes the following movements: *Allegro molto*, Chorale, Fugue, and Chaconne.²⁴ Although this is not a typical recomposition, Brubeck is for the most part faithful to the traditional fugal form as shown in Table 7-5.

The revision of fugal form featured here is primarily an emphasis on linear counterpoint rather than the simultaneities, functional progressions, and areas of centricity from traditional counterpoint. Notwithstanding, contrapuntal devices abound throughout, including compound melody, episodic development, voice exchange, imitation, and contrary motion. Examples 7-10 and 7-11 show the opening of the fugue in which these devices are at work. Notes are barred to show the compound melody. Motives are bracketed.

m.		:	5	ç)	13	3	1'	7	21	[25		
S	S2		CS		С		S 1		CS		С		С	
Ă					S		~~	~~	b		~~	с	~~	~~
Т							CS		SII	~~	~~	c	~~	~~
B	SII		А		CS		b	~~	SII	~~	~~	~~	~~	~~
C: Pedal	:				I		V		Ι				Π	
m. 2	29		33		37			4	7	5	50	5	4	
S	S		CS		S			~~	Х		Х		Х	
Α	~~	~~	~~	~~		c		~~	Х		Х		~~	~~
Т	SII		~~	~~	С			~~	~~	~~	~~	~~	~~	~~
B	~~	~~	S		CS			~~	~~	~~	~~	~~	~~	~~
C: Pedal	V : G		II		V									
m. 5	8	(51	62	63	64	65	(67	68	70			78
S	CS		~~	CS1	~~	~~	CS			~~	~~	Х		CS
Α	А		~~	~~	~~	~~	~~	~~	~~	~~	~~	~~	~~	CS
Т	~~	~~	~~	~~	~~	CS1	~~	~~	~~	~~	~~	~~	~~	
B	~~	~~	~~	~~	~~	~~	~~	~~		CS		~~	~~	~~

Table 7-7: Brubeck Fugue from the Chromatic Fantasy Sonata (fugal entries).

²⁴ See appendix for an analysis of the intervallic motives at work in this movement.





Example 7-10: Fugue from Brubeck Chromatic Fantasy Sonata, measures 1-11.



Example 7-11: Imitation in Brubeck Fugue, measures 1-7.

This revision also includes an emphasis on motivic intervals and cells as demonstrated in measures 17-20, in which there is a filling in of fourths and fifths as well as sets [025], [014], [024], and [013]. In measures 21-24, an episodic section ensues with transpositions of motive c and outlines of a fourth moving imitatively throughout the texture (see example 7-12).

C:



Example 7-12: Fugue from *Chromatic Fantasy Sonata*, measures 17-26. Voice exchanges, motives, intervallic spans and compound melody.

There is also a metric component to Brubeck's revision of the *Chromatic Fantasia and Fugue*. In measure 46, an ascending chromatic bass line accompanied by overlapping compound and scalar lines, ushers in a metric change to 3/4 in measure 47. Afterwards, in the remainder of the fugue are frequent metrical modulations which involve juxtapositions of 3/4 and 4/4 as well as 5/8 and 6/8.

In spite of Brubeck's revisions, there are faint traces of the Bach original to be found in the *Chromatic Fantasy Sonata*. For example, the rhythmic character of motive x, which will receive extensive development later, recalls the eighth-sixteenth figures of the Bach original's countersubject and linking gestures. Additionally, the parallel tenths between the tenor and bass in measures 17-20, are a reference to the parallel tenths found on the downbeat of measures 118-126 in the Bach original. In measure 41, the appearance of segments from the d natural minor scale in the bass, with each segment outlining fourths and fifths, is a reference to a similar passage in the original. Moreover, a reference to the Bach original occurs in measures 70-99, which corresponds to measures 107-110 of the Bach original.

Misreadings of the Fugue: Formal dissolution

Bud Powell "Tempus Fugue It"

This song was recorded by Powell in 1949. Thematically, it is a precursor to his Latin style Un Poco Loco, which was later recorded in 1951. Hence, this song alludes to the Latin style and the learned style of counterpoint all at once. Although Bud Powell's "Tempus Fugue It" is not a fugue, it contributes some interesting points regarding the phenomenon of misreading the traditional fugue. This song has two titles. Its original title is "Tempus Fugit," meaning time flies. Like its title connotes, this song proceeds at a break neck speed. Its alternate title is "Tempus Fugue It." Although there are no fugal processes at work, the main theme does have a Baroque-like character. As stated earlier, Powell was a great admirer of Bach. He had been conversant with the repertoire from an early age. The Baroque-like character of the melody can be attributed to the fact that it is harmonically conceived (see example 7-13). It consists primarily of rapid arpeggiations and stepwise motion. In fact, it closely resembles C.P.E. Bach's Solfeggietto which Powell would record later in 1958. The main theme of Solfeggietto is also harmonically driven consisting primarily of rapid arpeggiations and stepwise motion (see example 7-14). The opening sections of both works are harmonically slow. In both works, the main theme features steady rhythmic motion as gestures echo one another in different registers. Moreover, both pieces have gestures that cross the barlines. The effective use of silence in Powell's melody is highly evocative of Bachian artistry.



Example 7-13: Powell "Tempus Fugue It," measures 1-4.



Example 7-14: C.P.E. Bach Solfeggietto, measures 1-15.

Under Burkholder's typology, this song in D minor would be considered an example of stylistic allusion. It can also be an example of paraphrasing since it bears so many similarities with Powell's reading of *Solfeggietto*. This misreading of the fugue centers more on the melody itself than on the process. The melody is used as a source for all material and extemporations. This thematic focus is in keeping with Schoenberg's post-tonal conception of the musical idea. Hence, at the crux of Powell's misreading of the fugue is its invocation of the cultural connotations associated with the name, his departure from the traditional form, the formation of a fugue-like melody as a source for motives, and the integration of post-tonal and jazz harmonic vocabularies. Additionally, textural contrasts are important to this piece, as two part writing alternates with homorhythmic chordal passages.

"Tempus Fugue It" has the following form:

Intro	Head	Interlude	First chorus	Second chorus
m. 1-8	m.9-46	m. 41-46	m.47-70	m. 71-102
	a a b a m. 9-16, 17-24, 25-32, 33-4	0		
Third cho m. 103-14	orus Head 42 m. 143-176			

Table 7-8: Formal Organization of Powell "Tempus Fugue It."

In addition to its formal departures, this fugal revision also has a harmonic component. The employment of the harmonic vocabularies of bebop results in the octatonic collection figuring prominently in this song.

However, the absence of traditional fugal form and key areas does not negate the presence of contrapuntal elements. For example, the arpeggiations of the primary melody imply multiple voices although it is not compound. The presence of multiple voices is confirmed at various points in the right hand as seen the following measures: m. 14-15 and m. 22-24. This melody's propensity to expand and contract harmonically is a reference to Bachian artistry. The section beginning in measure 25, contrasts with the previous one with its emphasis on vertical sonority (see example 7-15). However, the texture continues to exhibit some contrapuntal attributes. With the right hand alternating between sustained harmony and quarter notes over a more active bass line, there is a sense of imitative and oblique motion between the two hands. This section also contrasts harmonically featuring largely linear non-functional progressions.



Example 7-15: Powell "Tempus Fugue It," measures 21-26.

Conclusions Regarding Misreadings of the Fugue

In the fugal works examined in this study, fugal processes are combined with the melodies, harmonies, and rhythms of both post-tonality and jazz as well as with the art of jazz improvisation. There are examples of harmonic innovation in each subcategory. In the recompositions of Bach fugues, there is a centralization of otherwise peripheral elements such as motives or individual pitches. Across the taxon, linear counterpoint takes precedence over vertical simultaneity in varying degrees. The most complex textures are derived from the progressive layering of linear counterpoint. Among the examples, the most complex textures are to be found in the Milhaud fugue from *La Creation du monde*. There is also a spectrum of how contrapuntal devices are employed, varying degree and context. As stated earlier, the revisions of the fugal form itself increasingly become so extreme, that the only remaining vestige is the use of a fugal subject which itself is subject to revision.

Misreadings of Dance Forms or Hybrid Dance Types

When dance forms from the Baroque, European folk tradition, Latin-American folk tradition, African-American folk tradition or the American popular dance tradition (including ragtime, jazz, or swing) is misread – a hybrid dance form results. Due to the overlap of the post-tonal movement, contrapuntal revival, and jazz era, there is a multiplicity of hybrid dance works which engage all three idioms.

In addition to combining disparate musical styles, the musical works in this study are considered to be hybrid dance forms because a specific dance form is referenced explicitly in the work itself or/and it contains identifiable rhythmic characteristics. Whereas form was a major concern of the previous taxon, rhythm comes to the forefront of this one. However, the concern for rhythm does not negate the importance or the role of other parameters such as pitch in defining the works encountered in this taxon. It will be observed that in each taxon cited in this study that every musical parameter is active and very much at work. When moving from one taxon to another, there are subtle changes in emphasis. There are five subcategories within this taxon: enhanced dance forms, imbued jazz, recompositions, learned style, and symbolic dances. Table 7-9: Hybrid Dance Types Taxon



Within the first subcategory, called enhanced dance forms, each dance form in question remains fully idiomatic and intact – in spite of the incorporation of counterpoint and elements

from either post-tonality or jazz. These compositions are further categorized according to paradigmatic origin of the composer. Here the term *revision* is used interchangeably with misreading, in keeping with Straus' theories of influence. ²⁵The act of misreading can be traced to a revisionist impulse. The jazz revisionist example is Tatum-Waller's "Jitterbug Waltz." The post-tonal revisionist works are Stravinsky's *Tango* and Bolcom's "Ragtime Inferno."

The second subcategory, known as imbued jazz, contains works in which the details of Baroque inspired counterpoint are subtle yet very much present. Moreover, the harmonic language reveals the commonality between post-tonality and jazz. These compositions engage all three idioms without creating any conflict within the jazz idiom. The representative works include: a selection from Gershwin's song repertoire and two selections from Miles Davis' Cool School recordings.

The third subcategory represents recompositions of existing works. The representative work is Loussier's recomposition of Bach's Gavotte in B minor for solo violin. Hindemith's *Ragtime* (Wohltemperiert) occupies a unique position standing transfixed between dance and fugal form. In addition to the melody, it possesses a fugato section. However, as indicated by the title and the form, the ragtime idiom is given greater emphasis, warranting its inclusion in this taxon. Moreover, the suitability of this Bach theme for the ragtime idiom is the primary focus of this composition.

The fourth subcategory consists of dances in the learned style. Here, the craft of counterpoint takes a leading role, retaining fewer of the characteristics considered as authentic to the dance idiom. Milhaud's *Trois Caprices* is a representative work. In spite of its inclusion of

²⁵ Joseph N. Straus, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge: Harvard University Press, 1990), 17.

Bach's theme Hindemith's *Ragtime* (Wohltemperiert) cannot be considered a dance in learned style due to its satirical effects.

Lastly, the final subcategory consists of symbolic dances. Here the dissolution of the dance form occurs in varying degrees. These dances are deemed as symbolic because they are often used, as in the case of Alban Berg, as cultural signs rather than as authentic representatives of a dance style. Works in this category are characterized as abstractions or deconstructionist in nature. The works labeled as abstractions have no apparent satirical intent towards the dances themselves. They are simply artistic renderings, based on the ideas present in jazz (or protojazz), which also engage counterpoint. The representative works are Villa Lobos' *Kankikis*, and Hindemith's *Ragtime* (Wohltemperiert), which converts Bach's C minor fugal theme into a ragtime piece for orchestra. The Hindemith example may not have a satirical intent towards ragtime, but one towards the learned style of Bach may be detected. On the other hand, for Alban Berg who saw jazz as a "symbol of decadence and decay," satirical intent towards jazz is very much present in his artistic rendering.²⁶ Therefore, the instances of jazz stylistic allusion in *Der Wein* and *Lulu* are categorized as parodical or deconstructionist.

Hybrid Dance Types: Enhanced Dance Forms: Jazz Revision

Waller-Tatum "Jitterbug Waltz"

The title implies a merger of two dances from disparate folk traditions. The jitterbug is often used as a generic term referring to any number of swing dances stemming from the African-American and mainstream American popular dance tradition. On the other hand, the waltz is a European folk dance which has a significant presence in Western art music as well. In this misreading of two dance forms, the waltz's triple meter and rhythmic feel is combined with jazz melody, jazz phrasing, jazz and post-tonal harmonic vocabularies, classical pianisms,

²⁶ Dave Headlam, *The Music of Alban Berg* (New Haven: Yale University Press, 1996), 7.

and contrapuntal technique. As stated earlier, both Art Tatum and Thomas "Fats" Waller have demonstrated great familiarity with Bach. The following is a formal outline of this waltz: Table 7-10: Formal Organization for Waller-Tatum "Jitterbug Waltz."

Intro	А		В	А	В	
	m.	3-18	m. 19-34	m.35-50	m.51-69	fermata
m. 1-2	m.	3-10, 11-18	m. 19-22, 23-	26,		
			m. 27-30, 31-3	34	ext.	
E-flt.M:		(deceptive)	B-flt.M (dece	eptive)	V	
А		В	А	В	A1	
m. 70-8	85	m. 86-101	m. 102-117	m.118-129	m.130-13	3
(deceptiv	ve)	B-flt.M	(deceptive)	B-flt.M	E-flt.M	

The melody of the A section is complex like a Bachian melody – best described as compound. It begins with an arpeggiation of the tonic harmony but culminates in three descending lines. Its top most line, beginning on scale degree three descends stepwise over an octave harmonized by thirds (see example 7-16). After an initial downward skip of a third from B-flat, the bottom line can be read as canonic imitation at an octave below. This all happens over an E-flat – B-flat open fifth drone. In measures 5-6, a faint chromatic countermelody can be discerned which was previously absorbed into accompanimental harmonies. However, by measure 7, this countermelody merges again into the harmonic background – an A-flat 9 (added 6th) harmony (see example 7-17). In keeping with the blues, the remaining space between measure 7 and the next phrase is filled in with ad-lib gestures consisting of neighboring notes, arpeggiation, and a chromatic descent into extended dominant harmony.

In the repetition of the A section, the tenor line is more well defined in measures 12-14 (see example 7-16). This time it is embellished. An initial leap and octave displacement in measure 13 implies an added melodic dimension to this tenor line – very evocative of Bachian artistry.

As the B section ensues in measure 27, there are implications for a multiplicity of melodic lines. Here, there is a compound configuration consisting of a melody and a partially chromatic countermelody. Moreover, there continues to be leaps in the left hand accompanimental gestures implying additional voices.



Example 7-16: Modified Schenkerian chart of Waller-Tatum "Jitterbug Waltz."



Example 7-17: Waller-Tatum "Jitterbug Waltz," measures 7-10.

With each repetition of the A and B sections the embellishments get more complex. The trills are a nod to the Baroque aesthetic. Increasing chromaticism, wider leaps and increasingly complex rhythms also characterize these embellishments. Triplet and quintuplet groupings seem to defy the meter. After the cadence in measure 69, Tatum explores the extremes of the highest

and lowest registers. Like a Bach keyboard work, the texture of this piece is prone to expand and contract at any moment revealing and obscuring latent voices in the texture.

Hybrid Dance Types: Enhanced Dance Forms: Post-tonal Revision

Stravinsky Tango (1940)

As stated earlier, South American dances, such as the tango, are closely related to ragtime and early jazz. This is attributed to a shared African heritage, which expresses itself through shared rhythmic characteristics. As with the Tatum-Waller example, the character of this bass line driven dance remains intact inspite of the infusion of contrapuntal activity between the voices. The form of this tango in D minor is as follows:

Table 7-11: Formal Organization for Stravinsky Tango.

Intro	А	В	Trio	Coda
m. 1-8	m. 9-16, 17-24	m.25-32	m.33-48	49-56

In the introduction, as in much of this piece, the harmony remains primarily static. D minor harmony is largely prolonged by the tonic pedal. Here, subtle contrapuntal lines are submerged in syncopated, extended harmonies. The abbreviated melodic gestures alternate with a double seventh chromatic gesture, {C, C-sharp, D} creating a subtle contrapuntal call and response. This double seventh gesture later acquires motivic significance. In measure 9, a clear melody emerges. In measures 13-16, a countermelody alternately asserts its identity and merges with the melody while the bass line becomes chromatic. The countermelody's shifting independence demonstrates how counterpoint can exist in a primordial form.

In measures 17-24, the second half of the A section, there is a continued interplay between the melody and countermelody in a largely static environment (see example 7-18). This subtle experiment with contrapuntal technique within the context of this dance form is the essence of this Stravinskian revision of an African derived dance idiom. In measures 22-23, a descending chromatic line, {A, A-flat, G, and F-sharp} moves from left hand to the right as an arpeggiation of D minor harmony moves from the right hand to the left – an example of inverted counterpoint. In the next measure, the chromatic strand {A, A-flat, G, and F-sharp} is repeated once more in measure 24, over a D minor arpeggiation which followed by a cadence with a picardy third (see example 7-18). A second chromatic line proceeds from an octave below on note A in contrary motion. This second line consists of notes {A, B-natural, B-flat, C, and D}. These two lines together create parallel sixths (B to G-sharp and B-flat to G), generating coloristic alterations of the underlining harmony. These same notes created parallel tenths earlier in measure 20 between A-flat and B-natural and G and B-flat.



Example 7-18: Stravinsky Tango, measures 22-24.

In the B section, beginning in measure 25, extended chords adorned by second dyads are prevalent in the texture creating a contrast to the previous section. This passage demonstrates how this proto-jazz idiom is enriched with uncharacteristic post-tonal vocabulary. The texture of this section becomes increasingly complex, as a chordal texture morphs into a tangle of individual lines. The trio section in measure 33 is a nod to the traditional minuet and trio. Again, there is an interplay between a harmonized melody and a chromatic countermelody.
Bolcom "Rag Inferno" from The Twelve Etudes

Bolcom approaches his juxtapositions in a more dualistic way, placing styles next to each other or spacing them distinctly from each other, so that they may interrogate each other, challenge the listener's preconceptions about them, and ultimately, alter each other by their association.²⁷

This etude is not only evocative of ragtime but of other jazz piano styles including stride. The harmonic and melodic features of this etude render an interesting reading of ragtime. In the first fifteen measures, for instance, many of the strong beat bass notes have a tritone relationship. The enrichment of this dance form with post-tonal vocabularies such as the whole tone and the octatonic collection is integral to this misreading.

In measures 1-5, there is a chromatic tenor line embedded within what is otherwise a typical ragtime accompaniment moving from G to G-flat/F-sharp to F to E. Moreover, there is embedded polyphony in what otherwise appears to be a traditional ragtime. There continues to be a discernible tenor line continuing through measures 4-8, moving from A to G to G-sharp twice then from B-flat to C-flat to D-flat. Moreover, there is an additional inner voice that has the following line: {C, D-flat, C, B, D, C, D}. The presence of these embedded melodic lines in this ragtime accompaniment brings to mind Hiram Moderwell's argument regarding the presence of polyphony in ragtime: "...It has gone far beyond most other popular music in the freedom of inner voices (yes, I mean polyphony) and of harmonic modulation."²⁸ Although this is a textural element, the revisionary ratio of motivicization can be applied to the voice leading of this etude in relative terms. Here, Bolcom takes an aspect of the existing style and intensifies it even more.

In this etude, ragtime syncopation is cast in complex webs of linear chromatic lines. Contained within the right hand gestures in measures 6-8 and measures 11-13, are compound,

²⁷ Dan K. Alexander, "Works for Piano by William Bolcom: A Study in the Development of Musical Postmodernism" (DMA diss., University of Cincinnati, 1994), 17.

²⁸ Carol Lems-Dworkin, Africa in Scott Joplin's Music (Evanston, IL: Carol Lems-Dworkin, 1991), 14.

chromatic melodic lines (see example 7-19). In comparison to other examples in this study such as Villa Lobos' *Kankikis*, the resulting rhythmic complexity does not undermine the feel of ragtime dance music. Just as in *Kankikis*, harmony and rhythm are important parameters. However, in "Rag Infernal" everything is reconciled with the idiom – even the most drastic textural changes.



Example 7-19: Bolcom "Rag Inferno," measures 6-8.

As stated earlier, for most of the work, the ragtime feel is maintained. Even in passages that have note against note textures (such as in measures 58-77), there continues to be a sense of a syncopated left hand ostinato that emphasizes beats 2 and 4. The only moment when the ragtime feel ceases, is in measures 117-125, when block chords are played creating stasis and hearkening back to an earlier etude. The juxtaposition of ragtime idiom with innovative 20th century pianistic technique creates a relationship between the two phenomena – thereby impacting our readings of each. After all, Bolcom's *Twelve Etudes* were conceived as a 20th century pianistic *tour-de-force*. The inclusion of a ragtime movement as well as the additional juxtapositions of this idiom with the trappings of contemporary piano music is very telling.

Hybrid Dance Types: Imbued Jazz

Miles Davis "Moon Dreams"

This is a D major arrangement of a tune originally penned by "Chummy" MacGregor and Johnny Mercer. This ensemble consists of alto sax, baritone sax, trumpet, horn, trombone, tuba, bass, and drums. The form is as follows:

Table 7-12: Formal Organization for Davis "Moon Dreams."

А		A1	В	С
a 1 4 5 0	b	17.04	25.41	10.50
m.1-4, 5-8	9-12, 13-16	m.17-24	m.25-41	m.42-59

This is a jazz form that is enriched by subtle contrapuntal processes, textural contrasts, and intervallic motives. Moreover, this work is representative of the commonalities shared by post-tonal and jazz vocabularies. However, unlike many examples in the compositional paradigm and this taxon, the title does not overtly reference any specific musical work or style of music. Nevertheless, "Moon Dreams" and "Israel" do engage the three idioms of post-tonality, jazz, and counterpoint. Miles Davis' formal training at Julliard as well as his familiarity with Western art music – both historic and contemporaneous – shines through in these works. In fact, Miles Davis caused quite a stir in the jazz world, when for these *Birth of Cool* sessions, he exclusively chose personnel who were formally trained. These works can be characterized as examples of "stylistic allusion," in which there is a connection to general styles of music.

The importance of counterpoint and contrapuntal devices is evident from the onset. There are illusions of complete parallelism, however each voice has its own identity (see example 7-20). Deviations from the parallelism create a subtle heterophony. Moreover, intervallic gestures and individual pitches can be found moving through the texture from voice to voice. A more thorough discussion of the contrapuntal aspects of this work is found in the convergences chapters.



Example 7-20: Davis "Moon Dreams," measures 1-2.

Davis "Israel"

This work in C minor was written by John Carisi in 1954. It has the same instrumentation as "Moon Dreams". Like "Moon Dreams," subtle contrapuntal activity, textural contrasts, and the blending of post-tonal and jazz vocabularies are at work in this piece. However, in contrast to "Moon Dreams," there are more complex contrapuntal textures, increased pitch class set activity, and more instances of middle-ground melodic progressions. The form adheres to the following construct:

Table 7-13: Formal Organzation for Davis "Israel."

Intro	a	a1	solo 1	interlude	solo 2	coda
m.1-8	9-20	21-32	m.33-56	m.57-60	m.61-80	m.81-96

Throughout "Israel" is a texture enhanced by canonic entrances, melodic convergences, gap-fill gestures (and vice versa), imitation, and countermelody, such as in measures 21-32 and measures 45-55 (see example 7-21). A more indepth examination is found in the convergences chapters.



Example 7-21: Davis "Israel," measures 21-25.

Gershwin's "I've Got Beginners Luck"

In this song, jazz form is enriched by contrapuntal activity, textural contrasts, and posttonal/jazz vocabularies. Similar attributes are evident in Gershwin's "Let 'Em Eat Cake" and "Mine." Regarding the incorporation of post-tonal vocabularies, Steven Gilbert attests to the complexities of the harmonic language – designating these songs as being the closest that Gershwin comes to atonality in his repertoire.²⁹ The study of each Gershwin song is in this taxon is based on a piano reduction. In "I've Got Beginner's Luck" counterpoint primarily manifests in

²⁹ Steven E. Gilbert, *The Music of Gershwin* (New Haven: Yale University Press, 1995), 224.

two forms: in the interaction between intervallic cells/pitch class sets and in middleground melodic progression between voices.

Gilbert points out in measure 5 of "I've Got Beginner's Luck", a $\{D - D\text{-sharp} - E\}$ line, set [012], in counterpoint against a $\{D - C\text{-sharp} - B\}$ line, [013] – all over an A pedal.³⁰ This contrary motion between the two voices is symmetrical, emanating from or centering around note D. Gilbert cites a possible connection with the counterpoint of Bartok.³¹

In the passage found in measures 9-12, a long-range, middleground melodic motion pervades the texture, creating a subtle counterpoint (see example 7-22). The soprano line moves from A down to D as an inner voice line moves from D down to A, via chromaticism. In measures 10-12, a tenor line spanning from E to A enters in near imitation with the inner voice from measure 9. Moreover, in measure 10, the tenor's first three notes, {E, D-sharp, A-sharp}, [016], is pitted against {A, A-sharp, G-sharp}, [012], in an alto voice similar to what was encountered in measures 5-7. In measures 25-27, in the piano part, there is a long range descent from D to C to B in an inner voice as the line above it implies multiple voices.



Example 7-22: Gershwin "I've Got Beginner's Luck" measures 5-12 and measure 30 (sketch).
In measure 30, set [0156] in the soprano ("Gosh, I'm lucky") is in counterpoint against
[0167] in the bass and the inner voices. The bass and the tenor are in near voice exchange.
Moreover, a tenor line consisting of notes {G, F-sharp, D-flat, C} moves in counterpoint against

³⁰ Ibid., 224.

³¹ Ibid., 225.

{C-sharp, C, G, F-sharp} in the bass. This is essentially a modified stretto, with the same notes spelled differently and rearranged. In measures 32-33, there is a descent from note D to C sharp to B via octave displacement. In the next two measures this descent is repeated and extended to note A in an inner voice. Synchronously, set [016] is featured in the melody ("Gosh I'm fortunate"), m. 36, accompanied by sets [012] and [0126] in the inner voices.

Hybrid Dance Types: Recompositions

Loussier-Bach Gavotte in B minor

This Gavotte revision is one of two by Jacques Loussier. This Gavotte in B minor comes from the Solo Violin Partita No. 1 (BWV 1002). The other is of the famous Gavotte from the Suite in D major (BWV 1068). The latter features a juxtaposition of the original work with idiomatic jazz passages – both sections often delineated by tempo changes. Loussier is in good company when it comes to misreading the Gavotte and other dances in the Baroque suite. In *Lulu*, for example, Alban Berg has his own misreadings of the Gavotte. This shared interest between post-tonal and jazz composers in the Baroque dance forms demonstrates the unity of the compositional paradigm. Loussier's recomposition of this Gavotte is the most simple of all of the recompositions featured in the larger compositional paradigm. Nevertheless, it is effective.

This revision is faithful to the original, excluding the introduction which is a syncopated vamp of the incipit. The jazz extended harmonies of this four measure introduction consist of the following: B minor 9th with an added 6th, E minor 9th, B minor 9th with an added 6th, and A dominant 9th. In the second ending, the A dominant 9th is replaced by a F-sharp minor 9th. Otherwise, most of the original melodic-harmonic content as well as the rounded binary form remains virtually the same (see example 7-23). The exceptions include the addition of sevenths to the existing harmonies, the parallel harmonization of the melodic lines, and a passage found in

measures 50-57, featuring a series of parallel tenths followed by contrary motion. Loussier's revision is primarily rhythmic and timbral in nature. As seen in example 7-24, dotted rhythms and syncopation are employed in order to make this Baroque piece conform to jazz phrasing. The characteristic comping gestures of jazz are added along with a rhythm section consisting of bass and drums. As with all Loussier-Bach recompositions there are moments of contrapuntal interaction between the bass and the piano.



Example 7-23: Bach's Gavotte in B minor from Suite for Solo Violin (BWV 1002).



Example 7-24: Loussier-Bach's Gavotte in B minor, a) intro b) measures 5-18.

This Loussier recomposition of a Bach Gavotte demonstrates that not every recomposition or misreading has to be thoroughgoing or complex. Simply, idiomatic phrasing in combination with instrumentation can significantly transform existing Baroque dances and existing Baroque works in general. The simplicity of this revision implies that there was enough present in the original Gavotte to transform it into a jazz recomposition. This implication brings to mind a Loussier comment discussed earlier. In a discussion on how some works by composers are more conducive to revision than others Loussier maintains:

Vivaldi's music is very different from Bach's in terms of its structure. There is jazz already present in Bach, in the number of measures, his harmonies, and so on, but Vivaldi may stay on one chord for many measures, and he may choose not to develop a harmonic idea. He often repeats a single theme several times, but in his string orchestrations he alters the tone colour. I had to approach the *Four Seasons* in terms of light and colour, and to think how to change these for my jazz improvisations.³²

Loussier's statement confirms that a concern for the development of motivic ideas, howbeit harmonic or melodic, is a common denominator shared by jazz musicians, post-tonal composers, and Baroque composers as represented by Bach.

Hybrid Dance Types: Dances in Learned Style

Milhaud Trois Rag-Caprices: Movement I

The Milhaud ragtime caprices exist in two versions: one for piano and the other for orchestra. The term *caprice* finds its origins in the Renaissance and Baroque being associated first with madrigals and later with a free fugal work for keyboard.³³ Other Baroque forms such as the canzona, toccata, and the ricercar were denoted by this term. It was also associated with dance forms such as the partita. Frescobaldi's capriccios are known for their eccentricities. Bach is also known to have written in that idiom. In the 18th century, this term was synonymous with *cadenza*. In short, the term *capriccio* indicates a composition which is subject "to the fancy (caprice) of the performer" with "unexpected and original effects."³⁴ Ragtime's technical demands and propensity for improvisation³⁵ makes it an ideal pairing with the capriccio

³² Alyn Shipton, *Handful of Keys: Conversations with Thirty Jazz Pianists* (New York: Equinox Publishing Ltd., 2004), 74.

³³ Wendy Thompson and Jane Bellingham, 'Capriccio; Caprice,' in *Grove Music Online. Oxford Music Online*, http://www.oxfordmusiconline.com/article/grove/music/capriccio (accessed February 2013).

³⁴ Wendy Thompson and Jane Bellingham, 'Capriccio; Caprice,' in *Grove Music Online. Oxford Music Online*, http://www.oxfordmusiconline.com/article/grove/music/capriccio (accessed February 2013).

³⁵ Edward A. Berlin: 'Ragtime,' in Grove Music Online. Oxford Music Online,

composition. Again, just as with the fugue from *La Creation du Monde*, Milhaud joins his posttonal expression with sentiments from the Baroque and Ragtime. Due to the character of ragtime music, our expectation regarding the *Trois Rag-Caprices* is for rhythm to have a significant role. Counterpoint also has an important role in this work, which goes beyond previous examples. So much so that this work and the other works of this taxon, are characterized as dance forms in learned style.

In the first movement, the dramatic focus is upon the alternation between a F-sharp major section and a F major section. This relationship between rival centricities is a nod to the F-sharp/F pitch inflection encountered in *La Creation du monde*. In fact, both the jazz ballet and these three caprices were completed the same year. Here, in the first caprice, the F-sharp/F inflection has gone from having motivic significance in traditional blues and Milhaud's jazz-ballet to being of structural significance. If Straus' theory of revisionary ratios were applied to Milhaud's treatment of blues inflections, it would be characterized as centralization. This movement from *Trois Rag-Caprices*, provides grounds for applying Straus' revisionary ratios to all borrowed music (including folk music) as well as with music from the past. Deborah Mawer confirms the appropriateness of this application. She maintains:

Generally, little analysis to date has attempted to ascertain the extent of deviation (and 'misreading') of jazz-inspired works from blues scalic formations and formal frameworks (as developed from Keil), so that one could pursue further the blues-scale model (as a 'background' structure), partitioned in the manner of van den Toorn's treatment of the octatonic collection in Stravinsky's music, elucidate analyses of , for instance, parts of Satie's *Parade* (1917), Stravinsky's 'Ragtime' from *L'Historie du soldat* (1918), Gershwin's *Rhapsody in Blue* (1924), or Ravel's 'Blues' from the Violin Sonata (1927). This concern obviously connects with the larger aesthetic question of 'influence' (post-Bloom), and beyond the specific instance of the blues, theories of influence and tradition (with application to Milhaud's music, amongst others) could be further developed in relation to philosophies of history and value, along with the sophisticated, recent lines of thinkers such as Hayden White and Frank Kermode.³⁶

http://www.oxfordmusiconline.com/article/grove/music/ragtime (accessed November 2011). ³⁶ Mawer, 279.

This study is largely based on the 1928 piano arrangement as well as an orchestral recording. At first glance, the opening caprice is set up like a typical rag – syncopated melody in the right hand with chordal figures in the left. However, motivic relationships progressively reveal themselves throughout. The presence of these motivic relationships in this dance form is one of the distinguishing characteristics of this revision. This revision is also colored by extended harmonies, pitch class sets, modality, and contrapuntal devices.

As the F major section ensues in measure 14, the enrichment of this dance idiom with contrapuntal complexity is evident. There are repetitions and imitations of the notes {D, C, B-flat} in both hands (see example 7-25). These notes articulate the set [024]. In the left hand, octave displacement disguises stepwise bass movement. Also, in measures 14 and 15, the harmonies are parallel forming the following near-palindromic progression: B-flat 9 – C9 – D7 – E diminished – D7 – C9 – B-flat – F major 11th.

In measures 16-17, a compound melody emerges in the left hand. The gestures are evocative of the ragtime left hand figures. The imitation of trichord {D, C, B-flat} continues in the alto voice and in a retrograde form in the bass. Each line of the compound melody, {B-flat, C, D, C} and {C, D, E, D} respectively, is a manifestation of set [024]. Moreover, these four note figures feature the roots of the chordal progression found in measures 14 and 15 – thereby representing that progression in microcosm.



Example 7-25: Milhaud Trois Rag Caprices, movement 1, measures 14-17.

In the passage that begins in measure 30, ragtime continues to be redefined as the centricities of F-sharp major and G mixolydian become coexistent realms moving in counterpoint (see example 7-26). Here, new material is encountered. The repetition of the notes F-sharp and G-sharp is a dimunition of the ostinato pattern from the opening. These three pitches together comprise set [025]. In measure 34, a sustained G major triad is used as a structural marker in a way similar to the F major triad in measure 18. Although this is a tonal context, the F major triad is being appropriated in a way that resonates with the misreading of triads in posttonal environments.³⁷ In measure 36, a half step transposition of the bitonal harmony found in measure 29 appears (E-flat -B-flat -G - B), also having serving the function as structural marker. Moreover, this sonority is embedded in the hexatonic set. This sonority can also be read in jazz nomenclature as an E-flat major chord with both the perfect and raised 5th present.



Example 7-26: Milhaud Trois Rag Caprices, movement 1, measures 30-36.

In measure 37, the F major/F-sharp major polarity continues with the onset of a different melody. In the bass and the tenor is a short ostinato of minor 7th dyads consisting of G-sharp – F-sharp and A-sharp – G-sharp, respectively. These notes together comprise the motivic set [024]. Starting in measure 44, the concept of invertible counterpoint is redefined outside of fugal form, as the F-sharp major and F major centricities switch positions. In measure 51, the F-sharp major section and the initial theme returns, amidst increased harmonic layering, clusters, and a B pedal.

³⁷ Straus, Remaking the Past, 74.

Like *La Creation du monde*, this first ragtime caprice is characterized by layers of contrapuntal complexity.

Hybrid Dance Types: Symbolic Dances: Abstractions

As stated earlier, symbolic dances, non-authentic forms laden with "cultural signs" of dance, are further categorized as abstractions and deconstructions. Abstractions take artistic license without possessing satirical intentions while deconstructions have a clear satirical intent.

Villa-Lobos Kankikis from African Folk Dances

The counterpoint featured here centers more on polyrhythm. In comparing this work to Joplin's "Maple Leaf," they indeed share some of the same characteristic gestures on the surface. However, in the opening measures of *Kankikis*, the bass is dominated by pedal tones. Absent is the mixture of leaps, stepwise and chromatic movement which outline chords while creating a sense of melody. Moreover, the rhythmic accents found in the opening measures of *Kankikis* are on both the downbeat and the offbeat. Indeed, there are passages in Joplin's "Maple Leaf Rag," which feature a repetition of chords, such as measures 9-16 (see example 7-28). However, a sense of movement continues through the voice leading.

The primary theme of this movement is not very melodic. It is primarily rhythmic in character consisting of percussive articulation of repeated notes (see example 7-27). This aspect is one of the differences between this movement and a piece such as Joplin's "Maple Leaf Rag." Although the primary theme of Joplin's rag is characterized by rhythm and arpeggiations, a sense of melodic continuity is created by long-range movement or middle-ground melodic progression. This dance by Villa Lobos, however, is largely about rhythm, harmonic color, and gesture. Hence, Villa Lobos' intensification of these parameters results in another example of misreading that ventures into abstraction. Of the three, the development of rhythmic ideas stands at the forefront.

Nevertheless, in the opening measures of *Kankikis*, the characteristic eighth note rhythms associated with ragtime are observed. Throughout, this rhythm occurs in various configurations as seen in measures 5-7, 26-28, and 68-83. Other rhythmic gestures that are developed in this work include sixteenth note and -tuplet gestures.



Example 7-27: Villa Lobos Kankikis from African Dances, measures 5-10.



Example 7-28: Joplin "Maple Leaf Rag," measures 9-12.

Hindemith's Ragtime (Wolhtemperiert)

This work is based on Bach's fugue no.2 in C minor from the *Well-Tempered Clavier*, Book I. Hence, this work is an example of what Burkholder calls modeling. In modeling, a new work appropriates part of an existing work's melodic material, form, or procedures for its own purposes. Employing Bach's fugal material as the subject of a ragtime piece, constitutes a misreading of both the Bach fugue and the ragtime style. However, the title *Ragtime* indicates a greater concern for the dance form. As stated earlier, Hindemith believed that the dance forms were an integral part of Bach's artistry. Hindemith asserted that if Bach were alive during the early twentieth century he would have written a similar work or at least a "shimmy." There are two versions of this work – one for orchestra and one for piano with four hands. This study will focus on the arrangement for piano with four hands. The most important features in this work will be highlighted. This work adheres to the following form:

Table 7-14: Formal Organization for Hindemith's Ragtime (Wohltemperiert).

Intro	А		Fugato	А	С	Fugato
m. 1-3	m. 4	4-23	m. 24-45	m.46-66	m. 67-80	m.81-103
	m.4-	7, m. 8-14,	cm-gm-cm-b-fltm-fn	1		cm-gm-cm
	m.15	5-19, m.20-23		(same)		bfltm-c#m-fm
A		Coda				
m.104-1	122	m.123-135				

The subject from the Bach fugue is employed throughout this work. However, this work is more like an essay on the original in the context of a dance-like form. However, as with Villa Lobos' Kankikis, this revision also obscures the feel of authentic ragtime. Hindemith's *Ragtime* (Wohltemperiert) is characterized by a dense layering of harmonies, referential collections, and rhythms. Moreover, much of the material is based on the development of a motivic third interval. Individual lines are largely obscured. Its aesthetic is brash as it proceeds with a forward moving, fast pace. Its dynamic levels and dissonances are extreme. This revision of ragtime is also colored by whole tone harmonies, augmented harmonies, bitonality, and a proliferation of triplet motives (see examples 7-29, 7-30, and 7-31).



Example 7-29: Hindemith Ragtime (Wohltemperiert), primo part, measures 8, 15-16.



Example 7-30: Hindemith Ragtime (Wohltemperiert), primo part, measures 20-22.



Example 7-31: Opening from Bach Fugue in C minor, WTC Book 1.

Hybrid Dance Types: Symbolic Dances: Deconstructions

Berg Der Wein

Headlam says the following regarding Berg's use of the jazz idiom:

Like other composers of his time, Berg also invoked popular contemporary jazz-related music as a symbol of decadence and decay. The texts of *Der Wein* and *Lulu* both concern Parisian demimonde. *Der Wein* uses three poems from a set of five, "Le Vin", from Bauderlaire's *Les fleurs du mal*, in a translation by Stefan George. *Lulu* is based on Frank Wedekind's plays *Erdgeist* and *Die Buchse de Pandora*, written in Paris between 1890 and 1895. Both *Lulu* and *Der Wein* contain tangos and English waltzes, and in both a jazz band is extracted from the orchestra. In *Lulu*, Berg integrated the popular elements into his language and imbued them with a larger meaning in the context of Lulu's fate. The jazz world is part of Lulu's character, associated with her dancing (Act III, scene iii) and it is played out dramatically and musically in the course of the opera. The Wedekind song added in Act III of *Lulu* is originally a cabaret song...³⁸

His use of the jazz idiom as a "symbol of decadence and decay," indicates that Berg may have

shared the popular German conception of "entartete musik." ³⁹ The portrayal of the jazz style in

this work can be described as deconstructionist, bearing more in common with the spirit of

parody. Historically, parody, along with harmonic innovation and quotation, has been used as an

expressive device in Western counterpoint.

³⁸ Dave Headlam, *The Music of Alban Berg* (New Haven: Yale University Press, 1996), 7.

³⁹ Dave Headlam, *The Music of Alban Berg* (New Haven: Yale University Press, 1996), 7.

The tango section of *Der Wein* begins at measure 39, ushered in by the piano's answer to what Headlam calls the "three attack upbeat gesture associated with vocal and instrumental entrances" (see example 7-32).⁴⁰



Example 7-32: Berg Der Wein, measures 39-40.

The three attack upbeat gesture with its rhythm and dissonance, recalls the opening gestures from Stravinsky's *Rite of Spring*. The three attack upbeat gesture is also closely related to the piano's tango rhythm,⁴¹ which itself motivic significance. Below is a synopsis of the characteristic rhythms prevalent in both the traditional tango as well as ragtime. As stated earlier the rhythms of tango, ragtime, and other African-derived proto-jazz forms are often interchangeable.⁴²

Headlam's describes Berg's tango derived motive in the following way:

The second motive, RH2, is associated with the tango rhythm, with proportions <1-2-1-2-1-1> grouping into a syncopated <3-3-2> within a defined metric group of 8 (also mm. 31-32, horns, and mm. 179-80 brass; mm. 38-39, piano, and m. 181, woodwinds; motive 2, mm. 43-46, and mm. 186-88, alto saxophone and clarinet). From m. 39 to m. 40, RH2 is diminuted from eighths to sixteenths. In the piano setting in m. 39, the rhythm is accompanied by its own retrograde pattern of <2-3-3>, with a macrorhythm of continuous sixteenths. ⁴³

Headlam adds the following regarding Berg's treatment of syncopation in this

tango and its rhythmic canons:

⁴⁰ Headlam, 300.

⁴¹ Gerard Behague: 'Tango,' in Grove Music Online. Oxford Music Online,

http://www.oxfordmusiconline.com/article/grove/tango (accessed November 2011).

⁴² Edward A. Berlin: 'Ragtime,' in *Grove Music Online*. Oxford Music Online,

http://www.oxfordmusiconline.com/article/grove/ragtime (accessed November 2011).

⁴³ Headlam, 300.

Although the tango begins strongly metric, with syncopation, durational canons consisting of variations on the tango proportions of <3-3-2> undermine the notated meter with conflicting meters and syncopations that imitate the popular jazz style. In mm. 41ff., the piano right and left hand have units of five sixteenths set in canon at a duration of three sixteenths. With the odd length and interval of imitation, the two parts constantly change beats. ⁴⁴

Adorno also identifies conflicts between Berg's rhythmic counterpoint and the traditional

tango rhythm:

Jazz, a phantasmagoria of modernity, is illusory [scheinhaft]: counterfeit freedom. Musically this illusion is a rhythmic one: the law of the pseudo meter [Scheintakte]. All jazz obeys this law in a literal sense. The technical idea behind jazz could be thus defined: to handle a sustained basic meter in such a way that it appears to be constituted from differing meters without yielding anything of its rigid authority. In the tango passage of "Der Wein" Berg adheres faithfully to the pattern: with syncopation and shifting accents he creates the 2/4 meter by adding together two groups of three sixteenths and one of two sixteenths. The three-sixteenths pulse within a 2/4 meter creates a characteristic tango effect. Berg emphasizes that in crucial moments. Compositional intention critiques the primitive jazz habit of paralyzing the psuedo meter through off-beat accents in the large drum and bass line. The 2/4 meter is given its due by the placement of the barlines; however, the three sixteenths, which are a mere rhythmic façade in the tango, exact consequences. That is brought about by rhythmic counterpoint within the polyphonic texture of the whole. Berg incorporates the three sixteenths in the accompaniment in such a way that, relinquishing the bass line effect, he has the accompaniment, a G-sharp and an A, each three sixteenths in duration, enter two sixteenths late.

Thus the melodic group 3/16+ 3/16+ 2/16 is simultaneously contrasted with its rhythmic retrograde: 2/16+ 3/16+ 3/16, thus the pseudo meter is worked out by means of a thorough development of its underlying principle; at the same time, however, the mechanism of jazz, the counterfeit integration of impotent subjectivity and inhuman objectivity, is transformed. Berg breaks his law by fulfilling it; the mechanical beats fall silent and the law itself is transformed into expression: the tango peers out of the music as with the empty eyes of a skull, symbolizing the fact that the conviviality of intoxication, of which Baudelaire's poetry speaks, is nothing by the allegorical figure of fatal estrangement....Kitsch, not tastefully dismissed but rather extended by its own laws ,is, under these compositional hands, transformed into style; thus the banal stands revealed as the phenomenon of the commodity and thus as the prevailing societal premise: but at the same time as a cipher of its downfall. Annihilation and deliverance, which Tango-kitsch undergoes in "Der Wein" – just as had vestiges of folklore in *Wozzeck* – are the paradigm for the annihilation and deliverance which Berg, a dialectician like all great artists of his historical stature, finally metes out to the human commodity: Lulu.⁴⁵

⁴⁴ Headlam, 300.

⁴⁵ Theodor W. Adorno, Juliane Brand, and Christopher Hailey, *Alban Berg, Master of the Smallest Link* (Cambridge: Cambridge University Press, 1991), 116-117.

These perceived conflicts with the traditional tango rhythm could be interpreted as a willful undermining of this popular musical style – an indication of its parodical impulse. On the other hand, what Headlam and Adorno identify as conflicts with the jazz syncopation are in fact indications of active layers of contrapuntal complexity. Throughout this taxon, as well as the larger paradigm, contrapuntal activity behaves as both an agent of innovation and an agent of deconstruction. Moreover, this great amount of contrapuntal activity and layering makes this passage bear similarities to the contrapuntal techniques exhibited in Milhaud's *La Creation du monde* and Stravinsky's *Symphony of Psalms*.

Headlam maintains that the piano part in measure 39, is a dimunition of what he calls the RH2 motive, which is "characterized melodically by pairs of descending intervals."⁴⁶ This motive in the piano part is highlighted in these opening measures either by silence or a sparse texture. This downward motive appearing earlier in the passages leading up to this tango section creates a sense of continuity. This sense of continuity makes the stylistic transition much smoother, contrasting with the stylistic juxtaposition found in other works of the larger paradigm. This gesture coupled with syncopated rhythm transforms into Berg's misreading of the bluesy wailing gestures and sliding notes found within the jazz idiom.

Idiomatic gestures continue to overtake the texture as in measure 54-55. Here, the trumpet has a bent note figure that is evocative of a jazz solo line. Its repetitiveness and semitone flourish brings to mind the alto saxophone's downward gesture from measures 43-45. This trumpet line is accompanied by an alto saxophone countermelody. The trumpet ends its melody with a minor 6th leap below, setting off a series of glissandos and runs throughout the texture.

True to the Adorno trademark for putting things well, this is a provocative commentary on the nature of jazz in the Berg repertoire and its relationship with the post-tonal aesthetic. The fact that Adorno does not approve of jazz, per se, is of no consequence.

⁴⁶ Headlam, 300-01.

Starting in measure 56, this downward motive is inverted in the trombone having evolved into glissandos of minor sixths – becoming an evocative jazzism. This primary focus on gestures in the absence of an authentic jazz "feel" resonates with Stravinsky's *Ragtime for Eleven Instruments*. The glissandos also appear in the violins whose downward minor 6ths alternate with the trombones. Here, there are several points of imitation throughout the texture. Meanwhile, another variation of this motive appears in the form of descending and ascending scalar figures in the flutes, piccolos, and bass clarinet. Headlam highlights this passage for its rhythmic conflicts.⁴⁷ With the exception of measure 56, these also outline sixths. The mirror image of the flute gesture is found in the bass clarinet in ascending form and in alternation, outlining mostly fifths.

Berg Lulu (measures 992-1020 from Act 1, Scene 3)

In the context of this opera, jazz is almost a character in its own right. Berg had already twice employed jazz as "an expressive device" in both *Der Wein* and *Wozzeck*.⁴⁸ Here, Berg has an actual jazz band as apart of the instrumentation. As stated earlier, for Berg, jazz is symbolic of the decadence of Lulu's world – thereby resonating with the conception of *entartete musik*.⁴⁹ Berg's *Lulu* is a quintessential engagement of post-tonality, jazz, and counterpoint, although post-tonality and counterpoint are the more prominent aspects of his compositional technique.

This passage opens with a D-G ostinato in the piano left hand and the trombones punctuated by the off-beat accents of the contrabass. The accents of the contrabass and the percussion, however, are not enough to counteract the overall effect of a steady stream of eighth notes, thereby creating a mechanical effect. This mechanical effect successfully distances the

⁴⁷ Headlam, 311.

 ⁴⁸ J. Peter Burkholder, "Style Contrast as a Formal and Expressive Device in Early Music" (paper presented at the annual meeting of the Southern Chapter of the College Music Society, Memphis, TN, February 25, 2011).
 ⁴⁹ Erik Levi: "Entartete Musik," in *Grove Music Online. Oxford Music Online,*

http://www.oxfordmusiconline.com/article/grove/music/entartetemusik (accessed April 2011)

listener from the jazz idiom as the attention is drawn to the dialogue. This mechanical effect along with the lack of a melody, relegates this instance of jazz to the realm of ambient entertainment. The texture is densely contrapuntal as the near canonic entrances of the piano, saxophones, and the trumpet overlap.

By measure 994, there is a web of rhythmic complexity as differing syncopations contradict one another thereby blending into ambiguity. There is an imitative exchange as notes from the piano in measure 993, appear in the tenor saxophone line in measure 995. Just as with the Stravinsky examples and Berg's *Der Wein*, this impedes the authentic swing effect of jazz. Nevertheless, the characteristic timbres including muted trumpet maintains a sense of the idiom in the midst of abstraction. The muted trumpet presents RI-4 of Lulu's principal row.⁵⁰ The trumpet's sixteenth-eighth-sixteenth gesture is evocative of the rhythmic patterns of both ragtime and the tango.⁵¹ The layering of largely ascending instrumental lines creates a sense of collective improvisation of classic jazz.

Conclusions Regarding Hybrid Dance Types

This taxon illustrates how contrapuntal devices, such as countermelody, imitation, and voice exchange; function within the context of a dance form. In fact, there are times in which the counterpoint appears to be in a primordial form – moving freely between melodic independence and an ambiguity between parts. This introduces the idea of counterpoint as a transitory state versus a static form or process.

The contemporary use of counterpoint within a dance context extends the Bachian and Baroque aesthetics which are very much rooted in the dance. The inclusion of jazz in works such as those by Hindemith and Berg, speaks to the widely held conception of jazz as a folk idiom

⁵⁰ Headlam, 356.

⁵¹ See ragtime and tango rhythm chart above.

that can be readily incorporated into the post-tonal movement and the wider Western art tradition. On the other hand, the contrapuntally and post-tonally embued jazz of Davis and Gershwin shows how music of the past and post-tonality advanced the objectives of jazz's greatest innovators.

In some of these hybrid dance forms, there is an invocation of jazz solo technique and collective improvisation – as seen in Stravinsky's *Ragtime for Eleven Instruments* and Berg's *Lulu*. This often takes the form of "call and response," which is prevalent among African-derived musical traditions. The employment of this device demonstrates its compatibility with the traditional counterpoint of Western art music.

The examples in this taxon demonstrate how harmony plays a key role in fulfilling the dance idiom's need for contrast. In works such as Milhaud's *Trois Rag-Caprices*, Hindemith's "Ragtime" from *Suite 1922*, and Davis' "Moon Dreams," individual sonorities function as structural markers, thereby signaling the gradual onset of musical space. More and more, the compatibility of jazz harmony and post-tonality comes to the forefront. Hindemith's *Ragtime* (Wohltemperiert) and Berg's twelve-tone works are among the most harmonically audacious of the hybrid dances. Such works can also be considered stylistic misreadings which will be discussed in more depth in the next section.

With the taxon of hybrid dance forms, there is a wide spectrum of treatments of the dance idiom. Here, the swing feeling exists in various states ranging from in its conventional use in jazz and proto-jazz (ragtime and tango) to its stylistic allusion and deconstruction. Within this taxon, counterpoint has been used either as an agent of enhancement or as an agent of rhythmic conflict and consequent stylistic deconstruction. Moreover, even in the more conventional examples, there continues to be significant textural changes and momentary disruptions of rhythmic flow. In works such as Davis' "Moon Dreams" and Bolcom's "Rag Inferno," there are moments of stasis which again sheds light on dance rhythms relationship with the contrapuntal phenomenon of musical space. Lastly, Loussier's recomposition of Bach's Gavotte demonstration how idiomatic phrasing and instrumentation can significantly transform the existing works within a dance idiom.

CHAPTER 8

TOWARD A TAXONOMY OF FORMAL CONVERGENCES II

Style as an Expressive Device¹ and Misreadings of Style

Robert Pascall defines style as "a term denoting a manner of discourse,

a mode of expression, more particularly the manner in which a work of art is executed."² This discourse or "mode of expression" is articulated through the parameters of a musical work. Moreover, Pascall asserts that style can be discerned in various scales ranging from a "chord, phrase, section, movement, work, group of works, genre, life's work, period" to an entire culture.³ The concept of style is very closely allied with the concept of a compositional paradigm. The latter term is much broader referring to the interactions within and between compositional communities as well as its aesthetic convictions, compositional techniques and characteristic musical works. The former term is more narrow and traditional, rooted in the concepts of absolute music. Within this revisionist paradigm, which engages forms and parameters from disparate traditions, there is also a taxon that revises style itself. Therein, style is transformed from a "mode of expression" to an "expressive device."⁴ Style is transformed from a musical object. Musical style which normally governs the manipulation of parameters becomes a parameter itself – also subject to manipulation.

¹ J. Peter Burkholder, "Style Contrast as a Formal and Expressive Device in Early Music" (paper presented at the annual meeting of the Southern Chapter of the College Music Society, Memphis, TN, February 25, 2011). ² Robert Pascall: 'Style,' in *Grove Music Online. Oxford Music Online*,

http://www.oxfordmusiconline.com/article/grove/music/style (accessed February 2012).

³ Robert Pascall: 'Style,' in Grove Music Online. Oxford Music Online,

http://www.oxfordmusiconline.com/article/grove/music/style (accessed February 2012).

⁴ "Mode of expression" is comes from the Pascal article. The term "expressive device" comes from the Burkholder lecture.

Under Pascal's definition, each of the earlier taxons are essentially misreadings of style. However, as the musical works studied earlier indicate, the earlier taxons were formed out of specific compositional concerns with fugal form and dance forms. On the other hand, this taxon is more general encompassing revisions of other musical forms as well as revisions of the Baroque-Classical aesthetic itself.

There are four subcategories within this taxon: recomposition, stylistic submersion, stylistic synthesis, and stylistic transfiguration.

Table 8-1: The Misreadings of Style Taxon



Misreadings of Style

The first subcategory, recomposition, has proven to be present in three out of the four of the taxons in this study. In earlier taxons, existing fugal and dance compositions were subjected to recomposition. Here the Baroque aesthetic in the form of existing Bach keyboard works is being revised. The representative works of this taxon include Powell's recomposition of C.P.E. Bach's *Solfeggietto* and Lewis' recompositions of Bach's preludes. The three works featured in this study, show different levels of juxtaposition. In spite of shared thematic material and seamless conjunction, the dualism featured in Powell's recording entitled "Bud on Bach" happens between two self-contained compositions – one classical and one jazz. Each stands on its own. On the other hand, the Lewis-Bach recomposition of Bach's C minor prelude assumes an ABA form, featuring two distinct stylistic sections which are artfully woven together as one unit. Moreover, on both sides of the jazz interpolation, Lewis is every bit as faithful with the Bach original as Powell.

Like the first subcategory, the second subcategory is characterized by the presence of more than one style. However, as we observe in Ives' "Thoreau", there are instances in which a lone passage in a distinct style appears in a foreign stylistic environment but for a brief moment in time never to return again. This unique phenomenon is classified in this study as stylistic submersion. A style is relegated to a passage or section that does not return elsewhere in the form.

In the third subcategory, there is a synthesis of style elements. In these compositions, there are no delineations of style within the form. Rather, style elements are fused together in one or two ways: principle annexation or motivic naturalization. In principle annexation, a specific compositional principle or principles from a different musical style or paradigm is applied in ways that are appropriate within a native paradigm. In *Concerto for Cootie*, how Ellington appropriates the concerto principle of contrast to suit the jazz idiom will be observed. In motivic naturalization, motivic material associated with a different musical style or paradigm is transplanted into a native paradigm to be developed according to its own dictates. As the title

indicates, Stravinsky's *Ebony Concerto* takes its thematic material from the world of jazz and develops them in according to the dictates of Western musical tradition.

The final subcategory, stylistic transfiguration, is the most advanced and complex. Here stylistic plurality does not manifest merely as a product of synthesis or linear succession. Stylistic plurality becomes multi-dimensional. Contrasting musical styles can move in counterpoint with one another. Moreover, musical style also becomes transitory and fluid. It is in this subcategory that style demonstrates itself as a phenomenon that is neither created or destroyed but changes from one form to another. The transitions between each change is often marked by stylistic ambiguity. The representative work in this category is Bolcom's Second Sonata.

Misreadings of Musical Style: Recomposition: Self-contained Dualism

Bach-Powell recomposition of *Solfeggietto* from "Bud on Bach"

Bud Powell recorded "Bud on Bach" which is a rendition of C. P.E. Bach's *Solfeggietto*. This rendition has two parts. The first part is a faithful rendition of *Solfeggietto* at lightning speed. Powell's rendition then transitions into a jazz section which has the traditional head-improvisation-head format. The head or the melody of the jazz section is virtually identical with the beginning of the *Solfeggietto*, excluding its syncopated jazz phrasing and the scoring in both hands (see examples 8-1 and 8-2). Powell's improvisation is traditional with "comping" in the left hand and solo extemporations in the right.



Example 8-1: C.P. E. Bach Solfeggietto, measures 1-15.



Example 8-2: Jazz head tune from Powell "Bud on Bach."

Misreadings of Style: Recomposition: Quotation and Comment

Bach-Lewis recomposition of the Prelude in C minor

Essentially, in each of the Lewis recompositions, he takes germ ideas from the Bach preludes to create something new. The revisionary ratio at work here is what Straus calls marginalization.⁵ Marginalization refers to profound changes in structural organization. In these recompositions essentially the product of jazz essays being inserted into these preludes. These offer Lewis' personal thoughts on what Bach has wrought.

⁵ Straus, *Remaking the Past*, 17.

The Lewis recomposition is faithful to the first twenty-four measures of the original. Beginning with measure 25, Lewis interjects his jazz extemporations. This coincides with the onset of the cadenza-like section in the original. Initially, the meter of the improvisation is in 6/8. The meter then moves back into 4/4 with a strong sense of two consecutive hemiolas. The opening of Lewis' solo sounds as if he were playing from a Schenkerian middleground graph of the Bach prelude. Bach's C minor prelude, which is characterized by its incessant sixteenth note arpeggiations features a slow, parsimonious harmonic change (see example 8-3). The jazz solo begins with a left hand gesture which is a simplified version of Bach's opening measures — with leaping between the pedal C and a sustained G in the tenor. In the right hand he sustains an E-flat which is played on the downbeat. The right hand initially follows vaguely the progression found in the first four measures.



Example 8-3: Bach Prelude in C minor, WTC Book 1.

However, Lewis quickly departs from it. Lewis begins to extemporize with the right hand while the left hand continues the same rhythmic pattern — descending gradually playing 6ths and augmented intervals. A jazz style solo improvisation ensues. At times, the left hand plays a full chord and breaks. Later, Lewis inserts a Latin flavor into the solo. After one minute, Lewis resumes the prelude exactly where he left off in measure 25. His recomposition is analytical in nature highlighting a few of the tones from the middleground structure.

Misreadings of Style: Stylistic Submersion

Ives "Thoreau" from the Concord Sonata

As stated earlier, Charles Ives was known for his quality transcriptions of ragtime and

Afro-American music. Berlin says the following regarding Ives' transcriptions:

...The transcription is by Charles Ives (1874-1954) and is given in his *Memos* to illustrate his memories of 'black-faced' comedians... ragging their songs' in Danbury and New Haven, Connecticut, around 1893-1894...Had other transcribers possessed some of Ives's skill, the historical record might be clearer on the precise relationship between ragtime and earlier black music. The shortage of verifying performance transcriptions, though, does not negate the testimony of contemporaries, and there are earlier published sources that support the link between ragtime syncopation and Afro-American music.⁶

In this passage from "Thoreau," ragtime references are combined with contrapuntal touches and post-tonal/jazz harmonies to create unique moments that are never recaptured afterwards. In stylistic submersion, lone passages in a distinct style appear in a foreign stylistic environment for brief moments never to return again. The fluidity of style featured here is in keeping with a composer who "speaks in many languages, in refinements of tone quality, overtones, polyrhythms, atonality, metrical changes of a suprising nature, and complicated jazz rhythms."⁷ This example of stylistic submersion is found between the first and second double bars. Like the rest of the movement, this passage is meterless. Moreover, this passage is characterized by jazz licks, gap-fill gestures, jazz extended sonorities, pitch class sets, alterations of the ragtime idiom; juxtapositions involving the ragtime idiom; and the use of referential collections (see example 8-4).

⁶ Carol Lems-Dworkin, Africa in Scott Joplin's Music (Evanston, IL: Carol Lems-Dworkin, 1991), 12.

⁷ Burkholder, *Charles Ives and His World*, 325.



Example 8-4: Ives "Thoreau" from Concord Sonata.

In the first appearance of ragtime style, a sense of ragtime piano is created by the collision of eighth note and sixteenth note figures in the bass and tenor. The eighth note figures emphasize the downbeat while the sixteenth notes emphasize the upbeat. The tenor line is chromatic while bass line has the character of an ostinato repeating notes B-flat and A. A gradual increase in tempo and dynamics accompanies this ragtime idiom. For much of this passage, individual lines are obscured by the layering of rhythms and overlap. In the fourth system the ragtime idiom momentarily vanishes as quickly as it came. This contrast is underscored by sudden reduction in tempo.

In the second repetition, expectations for a return of the ragtime idiom is dashed by a passage that only possesses slight glimmers of its predecessor. The downbeats are still emphasized. However, the characteristic ragtime flavor is obscured by arpeggiations in the left hand. Nevertheless, the right hand still retains its improvisatory essence. The final return is a lot like the first with slight alterations of register. This time the ragtime idiom returns with its gradual accelerando, crashing headlong into cascading gestures over a C pedal.

Misreadings of Style: Stylistic Synthesis: Principle Annexation

Ellington Concerto for Cootie (1940)

As stated earlier, in stylistic synthesis certain characteristics of two or more musical styles are fused together without any demarcations. In principle annexation, compositional

principles from a different musical style are being employed within the composer's native style. In *Concerto for Cootie* aspects of the concerto principle are applied within the jazz style. However, this work for jazz orchestra does not strictly adhere to traditional concerto form. Ellington's use of the term could very well signal his own misreading of this genre. Undoubtedly, he used this name to denote the call and response that occurs between the soloist and the ensemble (see example 8-5). There is also a main theme that pervades this work. The theme is actually a quotation from one of Ellington's popular songs, "Do Nothin' Till You Hear From Me." The use of a popular theme for a work meant for soloist and orchestra adds an additional dimension to Ellington's misreading. Under Burkholder's system the employment of this popular tune in the context of the concerto medium constitutes an arrangement. The exchange that occurs between the soloist, the woodwinds, and the brass in this concerto are highly contrapuntal in nature. Additional noteworthy aspects include nonfunctional harmonic progressions, chromatic-tonal dualities, timbral manipulation, an emphasis on contrasts, and motivic development.

The transcription by Dave Berger and Alan Campbell was used for this study. Structurally, this work more closely resembles a rondo than a concerto as shown below: Table 8-2: Ellington *Concerto for Cootie*.

Intro	А	A1	В	A1	С
m. A-G (editorial designation	m.H-m.9	m.10-20	m.21-28	m.29-40	m. 41-57
by Berger and Campbell)					
F major:			D-flat m	ajor:	
A					
m.59-74					
F major					

With his handling of timbre, Ellington is truly adhering the traditional concerto aesthetic of contrast. The main theme in F major is introduced in the first two measures by the second trumpet soloist using both a tight plunger and a straight mute. The accompanying timbre of the main theme will continue to change throughout the form.

In measures 14-16, the soloist focuses largely on five notes {C, B-flat, G, G-sharp, and A}. The repetition of these five notes mirrors the virtuosic gestures of the traditional concerto.

With the advent of the C section, there is an abrupt change from F major to D-flat major. The timbre of the soloist changes once more as no mute is used. Fortissimo is the dynamic marking. The soloist's vibrato and style of articulation are resonant with Louis Armstrong's style of playing. Incidentally, Armstrong and Ellington record the original pop song on which this concerto is based twenty years later in the 1960s. The melodic line consists of numerous triplets. It is also repetitive with pauses – mirroring free improvisation. Meanwhile, the texture is a great contrast to the previous sections. There is no longer the careful alternation of soloist and accompaniment. With exception of the trumpets, the full ensemble is playing for much of this passage. The accompaniment consists largely of long sustained lines. The woodwinds and brass continue to alternate between sustained lines and quarter-eighth note lines that counterpoint against the melody. The woodwinds continue to play chromatic countermelodies and non-functional progressions. The trombones are more aggressive inserting staccato gestures which make themselves known.



Example 8-5: Ellington Concerto for Cootie, measures A-D (reduction).

Misreadings of Style: Stylistic Synthesis: Motivic Naturalization

Stravinsky Ebony Concerto, Movement III

In motivic naturalization, motivic material associated with a different musical style or paradigm is transplanted into a native paradigm to be developed according to its own dictates. In this movement, there are repetitions of the melody and its variants, in various timbres and in a multiplicity of rhythmic contexts. Hence, the concerto aesthetic of contrast manifests in the form of contrasting representations of the jazz inspired theme. It is as if the theme, itself, is the soloist. The theme sounds like a near quotation of the incipit of the Negro spiritual "Motherless Child."

MOTHERLESS CHILD.



Example 8-6: "Motherless Child," Negro spiritual.

They both share a similar emphasis on the minor 3rd. Whether this is intentional or not cannot be determined. If it were intentional, this near quotation can be considered an example of what Burkholder calls paraphrase.⁸ Throughout this movement, the melody is subjected to a highly

⁸ Burkholder, 854.

contrapuntal atmosphere which mimics the collective improvisation of the early jazz band. Such an evocation of collective improvisation is an example of stylistic allusion. The bass clarinet and bass are the first to present this additive melody in unison (see example 8-7). They are accompanied by a rhythm section consisting of percussion and guitar. The guitar chord features set [0237]. In measure 12, the tenor sax centers on the first two notes of the melody forming a minor third. Meanwhile, the clarinets enter with chromatic gestures that alternate in hocket-like fashion. In this movement, the role of the clarinet mirrors its countermelodic role in the early jazz ensemble. The tempo speeds up and the excitement increases. The repetitions of the melody in varying timbres are evocative of canonical entrances.



Example 8-7: Stravinsky Ebony Concerto, movement 3, measures 1-5.

In measures 93-102, the clarinet assumes an improvisatory character with a highly embellished version of the melody which is characterized by leaps and triplets (see example 8-8). Meanwhile, the saxes harmonize the original melody in long tones. If it were proven that this melody was indeed a quotation of the Negro spiritual, this passage would qualify as a type of musical borrowing called cantus firmus.⁹



Example 8-8: Stravinsky Ebony Concerto, mvt. 3, measures 87-96.

⁹ Burkholder, 854.

By measures 112-117, the improvisatory gestures have moved from the solo clarinet line to the rest of the texture, highlighting a G-flat 13th harmony. It all culminates in a chorale-like harmonization of the melody involving every instrument in the ensemble over a rich D11th harmony – the ultimate contrasting representation of the melody.

Misreadings of Style: Stylistic Transfiguration

Bolcom Second Violin Sonata, First movement (1978)

This first movement entitled "Summer Dreams" dramatizes the conflict between the atonal and tonal spheres. It adheres to the following form:

А	В	A1
m.1-22	m.23-62 (interlude)	m. 63-88

In the A section, there is a juxtaposition of the two spheres. The former is represented by the violin who has a lyrical yet intervallically-dominated melodic line. The latter is represented by a piano part consisting of pedal tones and a blues style ostinato. In the B section, the piano and violin partake in a highly rhythmic, imitative exchange in the atonal sphere. However, the two instruments are still yet to play together in complete agreement. In the returning A section, as the piano resumes its tonally-centered blues style; the violin part is transfigured from an atonal to an authentic blues discourse.

This movement opens with a syncopated bass ostinato (see example 8-9). It is not fully clear yet that this a F blues. It has an ambiguous character. The ostinato is compound with the lower line being: {C-D-E-D}. The top line of the compound ostinato figure is: {A, B-flat, B-flat, C, C, B-flat, B-flat, A}. It is its palindronic character that may be offsetting a clear sense of blues. Both the ostinato and the compound melody are contrapuntal elements. The F pedal tone in combination with notes B-flat and C make reference to the traditional blues bass line.
However, they are played in sustained notes and in octaves. The violin enters imitatively on Eflat also playing sustained notes, outlining an augmented sixth, minor seventh, and then a diminished seventh. The focus primarily on the minor seventh would otherwise be at home with the blues. However, the violin line does not reinforce the tonal centricity of the piano part. The notes of the violin line clash with notes in the piano creating a sense of two mutually exclusive atonal and tonal spheres.



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Example 8-9: Bolcom Second Violin Sonata, measures 1-6.

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In measure 63, there is a return of the first section. This time the left hand pedal is energized by intermittent rhythmic figures which makes the blues character of the piano part overt. The piano part here evokes the boogie-woogie piano style. Meanwhile, the violin enters with a sustained A followed by an active line arpeggiating a D major chord – thereby clashing with the F centricity of the piano part. However, beginning in measures 68 and 69, the D major arpeggiation transforms into an arpeggiation of D diminished triad, which is immediately consonant and very bluesy due to the successive minor thirds (see example 8-10). The violin part harmonizes with itself largely with fourths, tritones, and sixths. Meanwhile, the piano part follows a typical blues progression sitting on the subdominant and later the dominant. Suddenly, this movement evokes Gershwin's bluesy *Nocturne*.





Example 8-10: Bolcom, Second Violin Sonata, measures 69-76.

In measures 78-79, the violin arpeggiates F major and F minor triads. In measure 83, the F- sharp makes a brief appearance in the piano part. In the penultimate measure a G-flat makes a final appearance, acquiescing to a D minor triad over a D pedal.

Conclusions Regarding Misreadings of Style

More so than in earlier taxons, this taxon features a heavy emphasis on contrast. Contrast in style manifests itself primarily in harmony, rhythm, and phrasing. In the jazz recompositions of the Baroque idiom, the thematic material and contrapuntal activity remain constant; while harmony, rhythm, phrasing and improvisation elucidate a change in style. Unlike in the hybrid dance forms, counterpoint has not been an agent of evolution or disruption in this taxon. In Ives' meter-less "Thoreau," the manipulation of rhythms and harmony were the primary factors in discerning the onset of the jazz idiom as well as moments of its ambiguity. In the stylistic synthesis subcategory, which featured concerto examples, contrasts were not established by traditional formal structure and key areas. In *Concerto for Cootie*, Ellington used every parameter including textural changes and changes in solo timbre to articulate the concerto principle. Stravinsky's concerto, on the other hand, which features the "twisted counterpoints" of early jazz; utilized texture, rhythm, and motivic development to create contrasts. The stylistic counterpoint between the post-tonal and jazz was primarily dramatized in the realm of pitch.

There are additional ways that this taxon distinguishes itself from the earlier taxons. In this taxon, the line between "call and response" of the African-American tradition and Baroqueinspired counterpoint blurs even more. This happens especially in the concerto examples. Lastly, it is interesting to note that in spite of the appearance of referential collections and pitch class sets; tonality has a greater hold in this taxon. Extended chord harmonies that are in keeping with the jazz idiom are even more prevalent. The examples are not as harmonically daring or as posttonal as some other examples that have been encountered.

Misreadings of Jazz Harmonies

In a chapter entitled "Triads," from Straus' *Remaking the Past*, the concept of misreading harmonies is introduced. According to Straus, the appearance of triads outside of their traditional contexts warrants our attention. Straus asserts: "... The triads become the locus of a conflict between old and new... They misread the triad, striving to neutralize its tonal implications and to redefine it within a post-tonal context."¹⁰ Although Straus' discussion centers on the function of the triad in post-tonal contexts, such as the C major chord in Berg's Wozzeck and the chorale in his Violin Concerto, this concept of misreading or revising harmony can also relate to what is normally regarded as jazz harmony. Although extended chord vocabularies are not the sole property of the jazz idiom, there are circumstances when idiomatic jazz harmonies are discernible. As stated earlier by Robert Pascall, an individual chord can be a carrier of style like other musical elements.¹¹ Often the discernment of style in such a small structure is corroborated by the presence of other elements. In the case of jazz harmony, there are other markers of the idiom. This taxon could very well be absorbed in the previous taxon regarding style. However, just as specific taxons were formulated to deal specific misreadings of the fugue and dance forms, another is needed to deal with those compositions in which jazz harmony is "the locus of conflict."¹² Whether or not jazz harmony is "the locus of conflict" is determined by how it functions in the given context. In this study, there are some compositions in which the appearance of jazz harmony is conferred significance.

¹⁰ Straus, *Remaking the Past*, 74.

¹¹ Robert Pascall: 'Style,' in *Grove Music Online. Oxford Music Online,* http://www.oxfordmusiconline.com/article/grove/music/style (accessed February 2012).

¹² Straus, *Remaking the Past*, 74.

This taxon consists of three subcatergories – in order from simple to complex:

submersion, contextualization, and spatialization.

Table 8-3: The Misreadings of Jazz Harmonies Taxon

Misreadings of Jazz Harmonies



Submersion as in the previous taxon, deals with a one time occurrence in a non-traditional context. The representative works in this study are passages from the third movement of Bartok's *Contrasts* and the first movement of Ravel's Concerto in G. In contextualization, jazz harmony is cast in a Baroque or Classical musical form. The only indication of the presence of the Baroque or Classical idiom comes from the form itself. The representative work in this study is Brubeck's Chorale from his *Points on Jazz* ballet. Chorales, traditionally associated with the Baroque medium, are more known for their harmonic progressions. How jazz harmonies interact within this Baroque aesthetic context will be explored. Lastly, in spatialization, jazz harmony is divorced from its idiomatic rhythm to create a sense of stasis. The representative work is "Premonitions" from Bolcom's *Twelve Etudes*.

Misreadings of Jazz Harmonies: Submersion

Ravel Concerto in G, First movement

As stated earlier, when Ravel was asked about his Concerto in G, he stated:

What is being written today without the influence of jazz? It is not the only influence, however, in the concerto one also finds accompaniments from the time of Bach, and a melody that recalls Mozart, the Mozart of the Clarinet Quintet, which by the way is the

most beautiful piece he wrote. What I wanted to do in the violin sonata was to accentuate the contrast between the percussive piano accompaniment and the weaker violin melody. In the concerto, I have also tried to realize this, but in a somewhat different way." ¹³

Ravel truly does accentuate a sense of contrast in this concerto through the combination of styles, textures, melodies, and other parameters. In rehearsal numbers 4-6 specifically, jazzinspired harmony and pitch collections, are also employed as stylistic devices. At rehearsal number 4, a new thematic section is introduced after a modulation to B minor. Here the texture reduces to the piano alone. Right away a stylistic and harmonic change is discerned as well as the onset of a new theme. This passage is submerged within the wider context of the first movement, accomplishing a distinct function in the form. This passage's isolation within the work along with the locus of revision primarily being harmonic and pitch oriented, accounts for its classification within this taxon – and not along with the other concerto examples in this study.

This passage of piano solo has a distinctly Latin flavor. Syncopation is created in the right hand by a triplet figure tied across the bar line. The left hand's arpeggiation is repetitive and dance-like with dyads on the weaker beats as seen in example 8-11.



Example 8-11: Ravel Concerto in G, first movement, rehearsal number four.

¹³ Arbie Orenstein, *A Ravel Reader: Correspondence, Articles, and Interviews* (New York: Dover Publications, Inc., 1990), 494.

A F-sharp dominant pedal tone is maintained in the left hand. However, the presence of both A-sharps and A-naturals belie any notion of F-sharp minor or F-sharp Phrygian. There are no other pitches besides A-sharp, C-sharp and the tonic that support a reading in F-sharp major. A bitonal reading of F-sharp Phrygian against F-sharp major could be substantiated although the right and left hands do not sound as opposing tonalities. There are definite affinities with the octatonic collection although outliers, such as G-natural and B-natural, prevent a definitive choice between octatonic zero and octatonic two. If A-natural is treated as an outlier, the notes of this passage are consistent with a Spanish scale built on F-sharp. F-sharp, G-natural, A-sharp, B-natural, C-sharp, D-natural, E-natural, and F-sharp. The clash of the A-natural and A-sharp in the fourth measure after rehearsal number 4 has the effect of a blues inflection. There are two versions of the F-sharp blues collection as shown below:

Table 8-4: Two versions of the F-sharp blues collection.

F-sharp	А	В	С	C-sharp	Е	F-sharp
F-sharp G-sharp	A A-sharp	В	С	C-sharp D-sharp	Е	F-sharp

The A and A-sharp along with the other notes of the passage suggest a blending of both versions of the blues scale. This blending of pitch collections in this passage is representative of Ravel's revision of both melodic and harmonic materials.

In the third, four, and eighth measures, jazz nomenclature can be used to describe the harmonies: F sharp 11th (m.3 bt.4), A-sharp major seventh with a flattened 5th (m. 4, bt. 1), A-sharp major seventh flattened 9th (m. 8, bt. 1) and F-sharp major with an added 6th (m. 8, bt. 2).

In the measure before rehearsal number 5, the piano soloist plays a melodic figure that fits comfortably in the second blues collection. The arpeggiation of F-sharp minor in the right hand subtly contrasts with the F-sharp major arpeggiation in the left hand. Also at rehearsal number 5, the clarinet enters almost imitatively after this melodic figure with a bluesy line that even more clearly evokes the second blues collection: C-sharp, D-sharp, A-natural, G-sharp, and F-sharp. The clarinet melody is imitated immediately by the trombone in the next measure in near overlap. These bluesy lines are accompanied by piano arpeggiations of both F-sharp major and D-sharp minor seventh harmony; sustained F major harmony in the strings; and percussion accents. The piano gestures can be read alternately as F major harmony with an added 6th, D-sharp.

In the ensuing measures leading to rehearsal number 6, the soloist is featured again without accompaniment. Initially, note E is emphasized in the right hand sounding like the flattened seventh of the F-sharp blues scale. The melodic figures still retain a Latin flavor consisting of A-naturals and G-naturals. However, pitted against staccato A-sharp diminished harmonies and then later a D-sharp diminished triad again suggests a blending of the blues scales and the Spanish scale. The coming key of E major in rehearsal number 7 is surely being anticipated – with an A-sharp diminished triad as vii diminished of V and the D-sharp diminished triad as vii diminished. However, these sonorities do not receive resolution. There is only a momentary sense of F-sharp minor on the last two beats of the fifth measure after rehearsal number 5.

At rehearsal number 6, the bluesy theme returns in near stretto among the trombone and woodwinds. Three measures before the coming E major key area of rehearsal number 7, there is a B major/B minor dominant harmony. This sonority could be labeled three different ways:

bitonal harmony, a subset of the octatonic collection, or as B7 with a raised 9th. The versatility of readings shows how Ravel has artfully melded together within this concerto, contrapuntal textures with post-tonal and jazz vocabulary.

Bartok Contrasts, Third movement, measures 103-168

Bartok's *Contrasts* was commissioned by Benny Goodman. It is in measures 103-131 of the third movement entitled "Sebes", that the onset of a passage in a submerged style is discerned, signaled by a psuedo-ragtime feel in the piano. This passage in 2/4 meter is indeed a misreading of traditional ragtime. Consistent with traditional ragtime rhythm is the steady eighth note pulse in the left hand pitted against off-beat rhythms in the right hand (as shown in example 8-12).



Example 8-12: Bartok Contrasts, movement III, measures 112-117 (piano part).

The stylistic revision is evident in the lack of consistency in sustaining syncopation between beats. Moreover, the insertion of double, triplet and quintuplet eighth note groupings that defy both regularity and barlines intensifies this misreading even more. These groupings create a tension with the traditional ragtime rhythm similar to what is found in ragtime works by Stravinsky.

Although rhythm is an important part of the stylistic identity of this passage, the primary locus of revision is harmony and referential collections such as the acoustic collections, modes, and octatonic collections. Throughout this passage from the third movement, pitch class sets and

post-tonal pitch collections interact with the jazz-inspired extended chord harmony. Moreover, the interactions between these pitch and harmony materials can often be described in contrapuntal terms.

In the second of half of this submerged stylistic passage, found in measures 132-168, harmony and pitch collections continue to be the locus of revision along with extensive use of syncopation and contrapuntal processes. At the onset, the meter changes from 2/4 to 8/8+5/8. This complex additive meter is an intermediary form between works in conventional meter and Ives' meterless works.

At the same, in the pick up to measure 142, the harmony changes in the piano accompaniment although the syncopated rhythmic pattern does not change. Curiously, the harmonic changes now do not adhere to the barlines. This added with the syncopation adds more of a metric disturbance. The harmony C minor is followed by A7 and set [013568] created by clusters. In the left hand is set [0167] with F-sharp as the lowest most note and pedal tone.

In measures 156-160, the violin and clarinet play alternating and overlapping gestures. In measures 156-157, the violin plays sets [0257] and [01357]. The clarinet responds in kind with set [0257] transposed 5 semitones as well as subset [013]. In the next two measures, the violin plays set [012478] which is overlapped by a clarinet gesture in contrary motion, set [01347] followed by [01267]. As shown below, the following superset-subset relationship can be observed in the violin and clarinet:¹⁴

¹⁴ Interval normal form shows the intervallic profile of all sets belonging to a given prime form. A comparison of interval normal forms often reveals intervallic relationships between different prime forms.

(1 3 21 14)	[012478]	violin
(1 21 3 5)	[01347]	clarinet

Table 8-5: The superset-subset relationship between the violin and clarinet.

The appearance of intervallic patterns (21) and (3) in both sets in different positions indicates an intervallic exchange between these sets. Meanwhile, the piano plays the following harmonies: G-sharp minor 6th; set [0136]; B major 6th; set [0136] transposed 5 semitones; sets [0237] and [015], including a D-sharp pedal; and an incomplete D-sharp diminished seventh chord, set [036] (see example). Sets [0237] and [015] have an INF relationship that mimics the inversional relationship:

(41 25) [0237](14 7) [015]

Moreover, set [015] in the piano has the following superset-subset relationship with set [01267] in the clarinet line:

- (11 415) [01267] clarinet in A
- (417) [015] piano

In measures 165-169, as the violin continues to play parallel ninths and the clarinet plays parallel 7ths above the violin's lowest note, they are repeatedly presenting set [013] and its inversion melodically. Vertically, they are playing whole tone subset [024] at various transpositions. This material in the violin and the clarinet at once creates tension and concord with the piano which is continuously alternating between the WT1 and WT0 collections. In this passage, the intensity heightens as the contrapuntal complexity heightens in both the horizontal and vertical realm. Alternating tension and release are in present the piano part as sustained bass

notes are alternately in an outlier and chordal member. In measure 169, this tension is resolved as the piano part settles on WT 0 and the instrumental lines present whole tone subset [024] both vertically and horizontally.

Misreading of Jazz Harmonies: Contextualization

The Chorale from Brubeck's Points on Jazz

Points on Jazz, an eight movement jazz ballet written for the American ballet theatre, is much like a set of theme and variations. Each movement featuring rhythmic, harmonic, and stylistic transformations of a theme based on Brubeck's *Dziekuje* (Polish for "Thank you") written in 1958. This theme has been compared by music editor John Salmon to Chopin's B-flat minor nocturne which is in the same key. There is a particular similarity to the second theme of the Chopin work which also begins with a chromatic descent from note F. Included among the movements of this ballet are the following: Prelude, Scherzo, Blues, Fugue, Rag, Chorale, Waltz, and A La Turk. Taken as a whole, this ballet is indeed a misreading of musical style and musical form. This study will focus on the Chorale whose locus of revision is jazz harmony.

Along with the fugal movement, this chorale movement is definitely a nod towards the Bachian artistry that Brubeck so admired. Brubeck often spoke of the importance of the chorale to his own artistry. His compositional training consisted of the Riemenschneider chorales. Stephen Crist quotes Brubeck who stated: "... 'the Bach book was the Bible in the class....[Milhaud] 'just saturated you with Bach chorales, to get that voice leading."¹⁵ The use of the chorale as fodder for musical composition is attested to by Robert Marshall and Robin

¹⁵ Stephen A. Crist, "The Role and Meaning of the Bach Chorale in the Music of Dave Brubeck," in *Bach Perspectives, Volume 5 Bach in America* (University of Illinois Press, 2003), 211.

Leaver who assert that "the chorale has provided raw material for a variety of compositional forms."¹⁶ Moreover, Brubeck was of the conviction that familiarity with the chorales was indispensable for the improviser:

When asked what advice he could offer to classically trained musicians who want to improve their improvisational skills, Brubeck said: 'I would advise a developing musician to study Bach first; a thorough understanding of Bach is the greatest training a pianist can have. Begin by playing in the Bach *Riemenschneider* edition, the 371 Harmonized Chorales, then improvise new melodies over the chord progression of a selected chorale. Next write Bach-like chorales and improvise new melodies over the chord progressions.¹⁷

For Brubeck the compositional process often began with improvisation. Hence, there is a possibility that this chorale existed in some form before for the composition of *Dziekuje*, on which the main theme is based. However, it is unclear which came first. This chorale's placement alongside other movements in which the theme is subjected to various stylistic transformations, suggests a treatment of this chorale movement as yet another stylistic transformation of the main theme. Not only is it representative of the Baroque aesthetic, this chorale, as a result of the long standing tradition of chorale harmonization, will be considered as a musical form that is primarily driven by harmony.

Brubeck's chorale in C minor consists of a four measure phrase followed by an extended twelve measure phrase which is varied in the repeat. It has been described as bitonal by John Salmon due to the polarity of a C minor right hand and a C major left hand (see example 8-13). The use of bitonality suggests the influence of his former teacher Milhaud. The superimposition of major and minor triads is also redolent of the music of Stravinsky. This chorale is unsuitable as a vocal composition. The ranges of all four voices, especially in the final measures, sets this

¹⁶ Robert Marshall and Robin Leaver: 'Chorale,' in *Grove Music Online*. Oxford Music Online, http://www.oxfordmusiconline.com/article/grove/music/chorale (accessed February 2012).

¹⁷ Stephen A. Crist, "The Role and Meaning of the Bach Chorale in the Music of Dave Brubeck," in *Bach Perspectives, Volume 5 Bach in America.* (University of Illinois Press, 2003), 211.

chorale apart as a purely instrumental composition. Just as with the melody of the prelude, the soprano begins with a leap of an octave and a chromatic descent from the fifth scale degree down to the third in the key of C minor. Almost every measure of the soprano line is framed by a pick up note. The alto voice differs from the original countermelody. There is no chromatic ascent culminating in an octave or unison. Characterized largely by gap-fill gestures in measures 1-6, it does, however, feature both the minor and major 6th. The presence of both the A-flat and A-natural which are preceded and followed by a G does provide a momentary reminder of the chromatic countermelodic line. Concurrently, the tenor and bass lines do a diatonic octave descent beginning on the mediant and tonic of the C scale, respectively. The clash of the major and minor thirds replaces the chromaticism of the original countermelody. The clash of the two thirds also creates a sense of bluesy inflection. Just as the measures 17-32 of the prelude are an example of melodic embellishment, this chorale can be considered a harmonic embellishment of the original melody.

In this opening phrase parsimonious connections are found between the following sets: [0347],[0236], [0135], [014], [0136], and [0235].¹⁸ With the exclusion of set [014], which is further away in Straus' mapping of parsimonious voice leading space, these sets are close voice leading connections. Brubeck's use of bitonality gives rise to pitch class sets that are embedded in the octatonic collection. These embedded sets include: [0347], [014], [0136], [0147], and [0137]. Set [0347], which is a triad with two thirds, is found at important structural points such as measures 1, 5,7, and 11-13. Set [014], which is a major-minor triad minus its fifth, is found both as a trichord as on the downbeat of measures 3 and 6, as well as, an embedded set. Sets [0136], [0147], and [0137] have been found in connection with altered half-diminished extended chords such as in measure 3 (bt.3), measure 8 (bt. 1), measure 9 (bt. 1),and measure 17 (bt.1).

¹⁸ Joseph Straus, "Voice Leading in Set-Class Space," *Journal of Music Theory*, vol. 49, no. 1 (2008): 45-108.

The second phrase begins with a tonicization of the subdominant F minor. However, there still remains a vague sense of centricity in C. It is in this phrase that bitonality extends into two diatonic sound masses moving in contrary motion with one another. The motion in all voices is largely stepwise. The tenor and bass move in parallel tenths.

In measure 8, there is a departure from the original melody. The stepwise motion of the final bars of the melody has been extended as well as the length of the chorale's second phrase. The soprano and alto hold as the tenor and bass continue their parallel tenth ascent threatening to overtake the upper range. Once the tenor matches the alto's E-flat in measure 8, both tenor and bass leap in the opposite direction. The bass leaps down an octave. The tenor leaps down a minor seventh. Meanwhile, the soprano and alto leap downward to begin a parallel third ascent in measure 9. This change in the texture creates the momentary aural illusion of a canonic entrance of voice pairs. In measure 11, we get a "tonic" sonority, complete with opposing thirds. However, this arrival does not create any sense of repose as the soprano leaps down from the tonic to the dominant over a bass leap of an octave in the opposite direction. During the second ending, we encounter sustained note values in all the voices in measures 19-20. The final four measures culminate with the alto line descending lower into the C major scale while the soprano extends into the highest octaves ending on an E-flat over a C major harmony.

The harmonies featured in this chorale, however in keeping with post-tonal vocabularies, can also be explained in terms of conventional jazz harmony. Many of these major-minor bitonal sonorities can be labeled as extended chords with raised ninths. Ninth chords predominate in this chorale – both dominant and diminished. Lowered ninths are found as well as raised ninths. On occasion raised and flattened ninths are found together such as in the G dominant sonority found

on the last two beats of measure 7. In measure 8, a sequence of S transforms can be found.¹⁹ As A-flat and E-flat are sustained in the soprano and alto voices, the parallel tenth movement of the tenor and bass create the following sonorities: Am with flat 5 and raised 7th, B with an added 6th and raised 9th, C with an added 6th and raised 9th, and D diminished with a flattened 9th. The parsimonious movement between those harmonies create the following S transforms: S4(3), S4(4), and S 4(3).

In the context of jazz theory, this chorale can be said to be harmonized entirely by chord substitutions. The concept of chord substitutions in jazz finds resonance in post-tonal theory as well – demonstrating a unified compositional paradigm. For example, although certainly not a proponent of jazz or jazz theory, Arnold Schoenberg sets forth his theory of chord substitutions in *Structural Functions of Harmony*. According to Schoenberg, chord substitutions can be derived from the leading tones of the modes. In seeking to fit both his personal "mode of expression" and the jazz idiom into the Baroque tradition, it is only fitting that Brubeck's chorale is deemed "harmonically fantastic" (to borrow Schoenberg's description of a Bach fugue).²⁰ It is in Bach's harmonization of modal chorales such as *Christus der uns selig macht* that the eccentricities of chorale harmonization are observed.

¹⁹ Adrian P. Childs, "Moving beyond Neo-Riemannian Triads: Exploring a Transformational Model for Seventh Chords," *Journal of Music Theory*, Vol. 42, No.2 (Autumn 1998): 181-193.

²⁰ Schoenberg, *Structural Functions*, 71.



Example 8-13: Brubeck Chorale from Points on Jazz.

Misreading of Jazz Harmonies: Spatialization

Bolcom Twelve Etudes: "Premonitions"

Regarding his Twelve Etudes Bolcom states:

I now embark on a stylistic and harmonic synthesis no longer involved with any local style—that of a fusion of tonality into non-centered sound (often miscalled 'atonal'), as a planet in space in draws gravity toward itself. Within this spatial (yet tonal) universe, one can attempt to calibrate one's distance from a strong tonal center with greater accuracy.²¹

Here, Bolcom confirms that harmony is an important part of his revisionism. This etude is characterized by rich jazz harmonies and string plucking gestures that evoke the note inflections of jazz and the blues. In fact, this etude is an exploration of extended chord harmonies and relationships derived from their manipulation. This exploration is divorced from meter – animated only by voice leading and rhythm. Therefore, the jazz harmonies have become spatialized, providing a context for the dualisms encountered in this etude. There is a dualism between octatonic and whole tone related sets. There is a dualism of pedals. There is also a dualism of textures. The first texture consists of five strummed notes alternating with a

²¹ Joshua Berrett, "Review," American Music, vol. 7, no.2 (Summer 1989): 234-5.

succession of chords in the right hand. The second texture, in contrast, consists entirely of verticalities assembled from pentachords in the right hand and three/four note collections in the left hand. The contrast between the two textures is further emphasized by the lower dynamic level of the second texture. However, if this etude were discussed in neo-Schenkerian terms, a deep middle-ground structure would be the prolongation of a cluster of three pitches – the source of all of the extended harmonies found on the surface. A deeper still, background structure would reveal a single pitch, B-flat. This etude makes a case for a perceived unity between jazz and post-tonal vocabularies. Its harmonies fit comfortably into the jazz nomenclature.

The following is a jazz theoretical labeling of the first seven measures: Table 8-6: Bolcom's "Premonitions" from *Twelve Etudes*.

	m. 2					m.3		
Right hand	Fm 11 th or A flat 9 with 6 th	B-flat 7 with flat 9 th	G diminished with flat 9 th	Fm 11 th	EM with flat 5 th ,shrp. 9 th , and flat 9 th	Fm11th	Gm9th, with 6 th	Fm11th
Left hand	A dominant 11 th					A dom. 11 th	F-shrp. 11 th , flat 5 th	A dom. 11 th

	m.4		m.5		m.6	
Right hand	FM11th, G-flat shrp. minor 5th 9 th	FM G-flat Gm 11 th min. 9th 9th	FM 11 th , shrp. 5 th	Fm11th	Fm11th FM11th, shrp. 5 th flat 9 th	Fm11th, Gm6 shrp.7 th & 9th
Left hand	F shrp Am7, 11 th , flat 5 th flat 5th	A dom. 11th	Am7, with flat 5 th	E-flat 7th with shrp. 9th	A dom. CM with 11 th shrp. 11th	



Example 8-14: Bolcom's "Premonitions" from Twelve Etudes, measures 1-3.

In the contrasting texture found in measure 7, an A-flat pedal is maintained in the left hand along with the B-flat in the right hand. With the A-flat being in the lowest voice, it establishes itself as the root of the ensuing harmonies extended harmonies. This passage features parsimonious transformations of A-flat extended harmony – including the synchronicity of both flattened and raised fifths and ninths. In spite of the reoccurrence of these contrasting sections based in A-flat centricity, by the final measure, the B-flat reinstates its dominance as the primary motivic pitch.

Conclusions Regarding the Misreadings of Jazz Harmonies

Within this taxon, each musical example shows jazz harmony functioning in contexts characterized by differing contexts and combinations: alone divorced from characteristic gestures and rhythms, enhanced by post-tonal sets and collections, subjected to diverse meters, subjected to meterlessness, and in the presence of changing styles. Counterpoint is a constant factor. In the third movement of Bartok's *Contrasts*, counterpoint combines with harmonic color and timbre creating a vibrant texture. Metric changes also enhance the harmonic color. Moreover, its

additive meters are shown to be an intermediary between traditional rhythm and the meterlessness of Bolcom's "Premonitions." In the passage from Ravel's Concerto in G, overlap occurs in several realms including: melody in the form of stretto, pitch collections, competing styles such Latin and blues, and harmonic centricity. In Bolcom's "Premonitions" from *The Twelve Etudes* lush harmonies become the backdrop for a duality of pedals and texture.

Conclusions Regarding This Paradigm

This proposed paradigm is defined by a mutual borrowing between post-tonality and jazz that is accompanied by the employment of contrapuntal processes. Within this paradigm which engages post-tonality, jazz, and counterpoint, the following is observed: a compatibility between post-tonal and jazz vocabularies, innovative uses of parameters, revisions of style, revisions of form, borrowing, recompositions and various stages of counterpoint.

In the course of analyzing works which engage these three idioms; certain pitch, stylistic, and textural characteristics emerge in different degrees and combinations. Each song, movement, or work has a unique combination of these characteristics creating an identity liken to a genome sequence. Among the pitch characteristics observed in the selected works for this study are the following, from simplest to most complex: pedal tone, ostinato, intervallic motives, structural dyads, tonality/tonal allusion, sequences, long-range movement, planning/parallelism, parsimonious voice leading, non-functional progressions, promissory notes, inflections/cross-relations, blues scale, alternative collections, Neo-Riemannian progressions, extended harmonies, suspensions, clusters, bitonality, pitch class set activity, atonality, and serialism.

Among the stylistic characteristics present in the selected works for this study are the following, in no particular order: improvisation, contrapuntal activity, canon, fugue, quotation, stylistic allusion, idiomatic jazz gestures/harmonies, dance, ragtime, tango, atonality, and

serialism. Among the formal characteristics observed in the selected works for this study are the following, in no particular order: sequences, long-range movement, canon, fugue, classical forms, ragtime, tango, and jazz forms.

The textural-contrapuntal characteristics represent the various stages of counterpoint from single tones to complex textures. Among the textural-contrapuntal characteristics observed are the following, proceeding from the simplest to the most complex: gestures, motives, riffs, sequences, octave displacement, gap/fill, compound melody, pedal tones, ostinato, imitation, canon, stretto, melody vs. countermelody, multiple subjects, contrapuntal activity, voice exchange, fugue, pitch class sets in counterpoint, layering, long range movement, and spatial characteristics. Long-range movement makes reference to Schenkerian middle and background perspectives of melodic movement. Spatial characteristics are the result of increasingly complex textures created by layering of melodic lines and gestures, resulting in the movement of sound masses in counterpoint.

The engagement of these three idioms in a unified compositional paradigm is the result of shared impulses. For example, jazz and proto-jazz, also known as ragtime, has often been described as a "ragging" tradition.²² This tradition "rags" on motivic, melodic, and harmonic ideas from the past as well as ideas from contemporaries. However, in like manner, post-tonal music, the Bach contrapuntal tradition/revival, and all of Western music history together constitute a "ragging" tradition in its own right. The end of result of "ragging" or musical

²² "Ragtime is not a type of song; it is a type of song treatment; in fact it is the distinctive American treatment of a song in general... 'Ragtime' pervades all styles and classes of American music, from the coon song to the parlor love song..."

Karl Koenig, ed. Jazz in Print (1856-1929): An Anthology of Selected Early Readings in Jazz History (New York: Pendragon Press, 2002), 87.

borrowing is stylistic heterogeneity. Per F. Broman confirms the pervasiveness of stylistic heterogeneity in all of Western music history from past to present:

Indeed, we have misunderstood most music from most eras by thinking in terms of single styles, when in fact stylistic heterogeneity has been a basic tool of musical construction from at least the alternation in medieval liturgical music of solo polyphony with choral chant to the current music of Frank Zappa and John Adams.²³

Hence, compositions which engage these three idioms are truly an extension of a classical and contrapuntal tradition that has historically engaged quotation, parody, allusion, stylistic heterogeneity, harmonic innovation, and rhythmic innovation. The Baroque era, especially, which is often represented by Bach counterpoint, possessed an aesthetic appeal for the composers of this paradigm as indicated by the output of Milhaud, Hindemith, Loussier, and Lewis.

Nevertheless, musical borrowing within the context of the twentieth century differs from the epochs before in distinct ways. An emancipation of dissonance also resulted in the emancipation of parameters, style, and counterpoint. This emancipation of parameters, style, and counterpoint has rendered these elements as potentially transitory phenomenons. Static conceptions no longer hold true in analysis. Moreover, the emancipation of parameters, style, and counterpoint results in the onset of the music space as foretold by Schoenberg, Varese, and Ligeti. Just as musical space is characterized by the equivalence of the horizontal and vertical, the remaining parameters cease to be mutually exclusive. Post-tonal simultaneities become an expression of counterpoint – and vice versa. Jazz harmonies are can now expressed in terms of post-tonality and vice versa. Textures in both jazz and post-tonal environments can be expressed in terms of contrapuntal processes and vice versa.

²³ Joseph N. Straus, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge: Harvard University Press, 1990), 72.

Hence, contemporary composers from jazz and the post-tonal traditions have had available to them an inexhaustible gamut of harmonic, stylistic, and contrapuntal resources. The engagement of an eclectic mix of disparate and historic styles provided a fertile ground for innovation as well as opportunities for convergence. What emerges is one spirit. One spirit that characterizes this contemporary musical age – a unified paradigm. A paradigm that is based not on uniformity but shared propensity for borrowing from one another as well as music of the past. A disparate body of works forming a larger, unified musical discourse or text. Each work referencing another work, which in turn, references another work. William Bolcom asserts that the cross-pollination that characterizes our present age arose out of necessity. He adds that "preexisting styles reflect and act upon each other."²⁴ Dan K. Alexander commentary regarding Bolcom is applicable to all composers of the proposed paradigm:

Bolcom approaches his juxtapositions in a more dualistic way, placing styles next to each other or spacing them distinctly from each other, so that they may interrogate each other, challenge the listener's preconceptions about them, and ultimately, alter each other by their association.²⁵

Regarding these interactions and relationships that result from musical borrowing, Burkholder

states:

We cannot fully understand any of the uses of existing music in isolation from the others. They evolved together growing out of another, so their histories interwine. Their boundaries overlap, both in procedure and function. Finally by referring to other music, all types of borrowing forces us to think of another piece of music, while we encounter the one in front of us, giving works that use existing music a special place that esteems both the contributions of each composer or improviser and the repetition of the familiar.²⁶

²⁴ Dan K. Alexander, "Works for Piano by William Bolcom: A Study in the Development of Musical Postmodernism" (DMA diss., University of Cincinnati, 1994), 92.

²⁵ Dan K. Alexander, 17.

²⁶ Burkholder, J. Peter "The Uses of Existing Music: Musical Borrowing as a Field," *Journal of the American Musicological Society*, Vol. 54, No. 2 (Summer 2001), 859.

Here, Burkholder describes the interactions and transformations that result from borrowing. The word "intertwine" implies that this proposed compositional paradigm is like the tangled branches of an overgrown vine. It is a complex network of relationships created by references. These relationships challenge our conceptions of the music, our listening, our subsequent analyses, and even our view of their histories. Ultimately, misreadings by composers set a precedent for subsequent analytical misreadings of pitch, style, and counterpoint. Straus confirms this stating: "…each recomposer urges us to rehear older pieces in light of post-tonal concern with motivic saturation and pitch class manipulations." In essence, musical borrowing by composers within this paradigm challenges listeners and analysts to listen to both works in innovative ways. Therefore, this compositional paradigm requires the formation of analytical system to address its unique attributes.

First of all, it is necessary that any analytical system employed transcends the conventional contexts of style and style periods. Analyzing this body of works as a compositional paradigm rather than a style yields the following benefits: it aids in the understanding of the structure of the compositional activity as well as the compositions; it provides a means for connecting the compositional philosophy of the composers; and it connects the body of works to a process of change and progression. Within the context of a compositional paradigm, style becomes something that is manipulated rather than something that dictates. This is essential for establishing broad connections between different styles as well as forming stylistic networks. The concept of style makes distinctions, whereas, the concept of compositional paradigm establishes commonalities between disparate elements.

The taxonomy assembled in this study gives structure to this stylistic heterogeneity. It shows how the interactions between these three musical styles impact musical form and conventions. According to Burkholder, giving structure to this paradigm is a necessity:

In my own more modest study of Ives' methods and their development, getting the taxonomy right has been crucial for understanding the evolution. I could not have understood how his borrowing procedures developed until I could distinguish between different procedures. Once I did so, I began to see how they are related, how they draw models and methods in the music of other composers and what aspects of each are distinctive or new.²⁷

Ultimately, musical borrowing leads to the advancement of the materials involved howbeit harmonic, stylistic, or contrapuntal in nature. It leads to the evolution of our thinking about those musical materials.

As stated earlier, taxonomic classification provides information that the previous study of convergences cannot. A taxonomy cannot be assembled based on convergences such as pitch and rhythm. Each expression, as Ravel explained, is too individual.²⁸ However, a taxonomy can be formed based on revisionary topics. These revisionary topics subsume the localized events and organizations of convergences. Taxonomic classification therefore focuses on the global connections of form, style, and signs. Form, style, and signs are generalized categories that reveal the overall structure of the proposed paradigm. Moreover, the taxonomic classification of these generalized categories provides a context for their evolution.

²⁷ Burkholder, 856.

²⁸ Ravel: "...it would be sufficient to have these same 'blues' treated by some of your own musicians and by musicians of European countries other than France, when you would certainly find the resulting compositions to be widely divergent, most of them bearing the national characteristics of their respective composers, despite the unique nationality of their initial material, the American 'blues.' Think of the striking and essential difference to be noted in the "jazz" and "rags" of Milhaud, Stravinsky, Casella, Hindemith, and so on. The individualities of these composers are stronger than the materials appropriated. They mould popular forms to meet the requirements of their own individual art. Again—nothing left to chance; again—minute stylization of the of the materials employed while the styles become as numerous as the composers themselves."

Arbie Orenstein, A Ravel Reader: Correspondence, Articles, and Interviews (New York: Dover Publications, Inc., 1990), 46.

These revisionary topics are expressed as taxons that have been subdivided according to similar characteristics. The four taxons within this paradigm include: misreadings of the fugue, hybrid dance forms, misreadings of style, and misreading of jazz harmony. The harmonic, motivic, and contrapuntal convergences resulting from stylistic allusion remain as constants. At times, these convergences behave as agents of evolution or deconstruction. Also operative within the taxonomy are: properties of the emancipation of parameters, the onset of musical space, varying degrees of complexity, varying degrees of revision, and fluidity of style. The quintessential examples of this paradigm which engage post-tonality, jazz, and counterpoint are Milhaud's *La Creation Du Monde*, Hindemith's *Ragtime* from *Suite 1922*, Berg's *Lulu*, and Waller-Tatum's *Jitterbug Waltz*.

A paradigm that engages post-tonality, jazz, and counterpoint is applicable to other musics, including popular music. All contemporary music regardless of stylistic labels has a relationship with each of the musical styles engaged by this paradigm. The vocabularies of post-tonal music and jazz as well as various states of counterpoint are observable in popular music. Applying the principles of this paradigm to other musics, further expands the network of styles – being the ultimate consummation of stylistic heterogeneity. Such application of this paradigm and taxonomy is in keeping with the aims of musical borrowers such as William Bolcom who sought to blur the distinctions between popular and art music.²⁹

²⁹ Bolcom: "How do you get people to pay real attention to music again?...What clearly is lacking is ... a marrying, between the old, aristocratic, and the new, popular, demotic musical cultures. Together, they can nourish each other; separately, both suffer."

[&]quot;I now embark on a stylistic and harmonic synthesis no longer involved with any local style—that of a fusion of tonality into non-centered sound (often miscalled 'atonal'), as a planet in *space* in draws gravity toward itself. Within this spatial (yet tonal) universe, one can attempt to calibrate one's distance from a strong tonal center with greater accuracy."

Dan K. Alexander, 90.

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